

PROCRASTINATION: TESTING A SELF-DETERMINATION THEORY-
BASED MODEL

A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF SOCIAL SCIENCES
OF
MIDDLE EAST TECHNICAL UNIVERSITY

BY

SEVGİ SERHATOĞLU

IN PARTIAL FULFILMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF DOCTOR OF PHILOSOPHY
IN
THE DEPARTMENT OF EDUCATIONAL SCIENCES

MAY 2018

Approval of the Graduate School of Social Sciences

Prof. Dr. Tülin Gençöz
Director

I certify that this thesis satisfies all the requirements as a thesis for the degree of Doctor of Philosophy.

Prof. Dr. Cennet Engin Demir
Head of Department

This is to certify that we have read this thesis and that in our opinion it is fully adequate, in scope and quality, as a thesis for the degree of Doctor of Philosophy.

Prof. Dr. Oya Yerin Güneri
Supervisor

Examining Committee Members

Prof. Dr. Nilüfer Voltan Acar	(TED Uni., EDS)	_____
Prof. Dr. Oya Yerin Güneri	(METU, EDS)	_____
Prof. Dr. Filiz Bilge	(Hacettepe Uni., PDR)	_____
Prof. Dr. Özgür Erdur Baker	(METU, EDS)	_____
Assoc. Prof. Dr. Zeynep Hatipoğlu Sümer	(METU, EDS)	_____

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Last name: Sevgi Serhatođlu

Signature :

ABSTRACT

PROCRASTINATION: TESTING A SELF-DETERMINATION THEORY- BASED MODEL

Serhatođlu, Sevgi

Ph.D., Department of Educational Sciences

Supervisor: Prof. Dr. Oya Yerin Güneri

May 2018, 177 pages

The purpose of this study was to test a model investigating the role of basic psychological needs satisfaction in predicting procrastination through the indirect effect of depression, self-esteem and self-control. The constructed model was based on self-determination theory, in which procrastination was considered as a compensatory motive for unfulfilled needs. The sample consisted of 721 undergraduate students (466 females, 252 males, 3 did not indicate gender) selected from a private university in Ankara. Basic Psychological Needs Scale, Depression Anxiety and Stress Scale, Rosenberg Self-Esteem Scale, Self-Control Schedule, Demographic Information Form and Tuckman Procrastination Scale were used as data collection instruments. Path analysis was used to test the fit between the proposed model and the data.

The results showed that data fit the model. Procrastination was negatively predicted from competence need satisfaction and self-control; and positively predicted from depression and relatedness need satisfaction. Self-control was predicted negatively from depression and positively from competence need satisfaction and self-esteem, whereas self-esteem was predicted positively from autonomy need satisfaction and competence need satisfaction. Depression was

predicted positively from competence need satisfaction and negatively from self-esteem.

The findings suggested that self-esteem and self-control fully mediated the relationship between autonomy need satisfaction and procrastination; and also partially mediated the relationship between competence need satisfaction and procrastination. In addition, depression and self-control partially mediated the relationship between competence need satisfaction and procrastination. The findings of the study were discussed within the need based self-determination theory framework by shedding light onto the procrastination literature from an alternative perspective.

Keywords: Procrastination, Self-Determination Theory, Basic Psychological Needs Satisfaction, Self-Esteem, Self-Control.

ÖZ

ERTELEME: ÖZ-BELİRLEME KURAMINA DAYALI BİR MODELİN İNCELENMESİ

Serhatođlu, Sevgi

Doktora, Eđitim Bilimleri Bölümü

Tez Danışmanı: Prof. Dr. Oya Yerin Güneri

Mayıs 2018, 177 sayfa

Bu çalışmanın amacı, depresyon, benlik saygısı ve öz-kontrolün dolaylı etkisi yoluyla temel psikolojik ihtiyaçların karşılanmasıyla ertelemeyi ne ölçüde yordadığını araştıran bir modeli test etmektir. Kurulan model, ertelemeyi karşılanmayan ihtiyaçları telafi edici bir yönelim olarak ele alan öz-belirleme kuramına dayalı olarak oluşturulmuştur. Araştırmanın katılımcılarını, Ankara'daki bir özel üniversiteden 721 lisans öğrencisi (466 kadın, 252 erkek ve 3 kişi cinsiyet belirtmemiştir) oluşturmuştur. Çalışmada veri toplama araçları olarak Temel Psikolojik İhtiyaçlar Ölçeđi, Depresyon Kaygı ve Stres Ölçeđi, Rosenberg Benlik Saygısı Ölçeđi, Öz-Kontrol Envanteri, Demografik Bilgi Formu ve Tuckman Erteleme Ölçeđi kullanılmıştır. Verinin modelle uyum gösterip göstermediğini test etmek için yol analizi kullanılmıştır.

Sonuçlar, verinin modelle uyumlu olduğunu göstermiştir. Yeterlilik ihtiyacının karşılanması ve öz-kontrol ertelemeyi olumsuz, depresyon ve ilişkililik ihtiyacının karşılanması ise olumlu yönde yordamıştır. Öz-kontrolü, depresyon olumsuz, yeterlik ihtiyacının karşılanması ve benlik saygısı olumlu yönde yordamıştır; benlik saygısını ise özerklik ve yeterlik ihtiyacının

karşılanması olumlu yönde yordamıştır. Depresyonu yeterlik ihtiyacının karşılanması olumlu, benlik saygısı ise olumsuz yordamıştır.

Bulgular benlik saygısı ve öz-kontrolün, özerklik ihtiyacının karşılanması ve erteleme arasında tam, yeterlilik ihtiyacının karşılanması ve erteleme arasında kısmi aracı değişken olduğunu göstermektedir. Ayrıca, depresyonun ve öz-kontrol de yeterlilik ihtiyacının karşılanması ve erteleme arasında kısmi aracı değişken olduğu bulunmuştur. Bulgular, ihtiyaç temelli öz-belirleme kuramı çerçevesinde erteleme alanyazınına alternatif bir bakış açısıyla ışık tutularak, tartışılmıştır.

Anahtar Kelimeler: Erteleme, Öz-Belirleme Kuramı, Temel Psikolojik İhtiyaçların Karşılanması, Benlik Saygısı, Öz-Kontrol.

To My Hubby, Ali Osman

ACKNOWLEDGEMENTS

Firstly, I would like to express my special thanks to my advisor, Prof. Dr. Oya Yerin Güneri for her kind and patient guidance throughout this study. Her open and clear communication was very precious for me. She was present at all times when I need her.

I want to thank my committee members Prof. Dr. Nilüfer Voltan Acar, Prof. Dr. Filiz Bilge, Prof. Dr. Özgür Erdur Baker and Assoc. Prof. Dr. Zeynep Hatipoğlu Sümer for their precious contributions. It was very meaningful for me to feel their support and to see that they shared my excitement.

I would like to thank Prof. Dr. Ceylan Daş for her precious contributions to the development of the model. Also, I would like to express my thanks to Assoc. Prof. Dr. Yeşim Çapa Aydın and Assoc. Prof. Dr. Nuri Doğan for their valuable guidance and contributions for data analysis. I am kindly grateful to my friends Dr. Pınar Çağ for her effort, support and encouragement in the data analysis and Dr. Gökçen Aydın for her precious help and support in the writing process.

I would like to express my special appreciation to my friends Selda Aras, Sinem Sözen Özdoğan for their precious support and encouragement not only for my dissertation but also throughout my graduate years. Besides, I want to thank Ebru Boynueğri for being with me in this process and Sercan Çelik for his precious contribution in the Turkish translation. I also would like to thank my dear friend Candan Kızılgöl to be with me especially at the most important times since my childhood.

I would like to share my deep sense of appreciation with my dear family; mom, dad, mother-in-law, father-in-law, brothers Osman and Uğur, aunties

Serap and Aynur, sweeties Elif, Tarık, Emre, Nil Sude, Nehir, brother-in-law Cavit and my fabulous hubby Ali Osman. Your presence and efforts made me feel supported to finish this study. I love you so much.

Finally, I want to thank The Scientific and Technological Research Council of Turkey (TÜBİTAK) which supported me as a scholarship holder throughout my doctorate.

TABLE OF CONTENTS

PLAGIARISM	iii
ABSTRACT	iv
ÖZ	vi
ACKNOWLEDGEMENTS	ix
TABLE OF CONTENTS	xi
LIST OF TABLES	xiv
LIST OF FIGURES	xv
CHAPTER	
1. INTRODUCTION	1
1.1 Background of the Study	1
1.2 Purpose of the Study	10
1.3 The Hypothesized Path Model and Hypothesis	10
1.4 Significance of the Study	15
1.5 Definition of the Terms	18
2. REVIEW OF THE LITERATURE	20
2.1 Definitions of Procrastination	20
2.2 Theoretical Models of Procrastination	23
2.2.1 The Differential Psychology Perspective	26
2.2.2 The Motivational and Volitional Psychology Perspective	29
2.2.3 The Clinical Psychology Perspective	30
2.2.4 The Situational Perspective	32
2.3 Self-Determination Theory	33
2.4 Procrastination and Related Variables	35
2.5 Procrastination and Its Relation with Basic Psychological Needs Satisfaction, Depression, Self-Esteem and Self-Control	36
2.5.1 Basic Psychological Needs Satisfaction (BPNS)	36

2.5.2 Depression	39
2.5.3 Self-Esteem	41
2.5.4 Self-Control	45
2.6 Summary of Review of Literature	47
3. METHOD	49
3.1 Design of the Study.....	49
3.2 Sampling Procedure and Participants	49
3.3 Data Collection Instruments	51
3.3.1 Demographic Information Form	52
3.3.2 Tuckman Procrastination Scale (TPS).....	52
3.3.3 Basic Psychological Need Scale (BPNS)	56
3.3.4 Depression Anxiety and Stress Scale (DASS).....	60
3.3.5 Rosenberg Self-Esteem Scale (RSES).....	63
3.3.6 Self-Control Schedule (SCS).....	66
3.4 Data Collection Procedure	70
3.5 Description of Variables	70
3.5.1 Exogenous variable.....	71
3.5.2 Mediator variables	71
3.5.3 Endogenous variable.....	72
3.6 Data Analysis	72
3.7 Limitations of the Study	73
4. RESULTS	74
4.1 Preliminary Analyses	74
4.2 Descriptive Statistics and Correlations	77
4.3 Path Analysis for Model Testing	79
4.3.1 Results of Fit Statistics	80
4.3.2 Results of Individual Paths	81
4.3.3 Regression Equations for Direct Paths	83
4.3.4 Direct and Indirect Associations.....	85
4.3.5 Hypotheses Testing.....	93

4.4 Summary of the Results	98
5. DISCUSSION	100
5.1 Discussion of the Findings	100
5.1.1 Discussion of the Direct Effects.....	101
5.1.1.1 Direct Relationships among Exogenous Variables	101
5.1.1.2 Direct Relationships among Endogenous Variables	101
5.1.1.3 Direct Relationships among Basic Psychological Needs Satisfaction and Endogenous Variables	103
5.1.2 Discussion of the Indirect Effects	105
5.1.2.1 Indirect Relationships among Endogenous Variables.....	106
5.1.2.2 Indirect Relationships among Basic Psychological Needs Satisfaction and Endogenous Variables	107
5.2 Implications for Practice	109
5.3 Recommendations for Further Research.....	111
REFERENCES.....	113
APPENDICES	
A. APPROVAL LETTER FROM METU HUMAN SUBJECTS ETHICS COMMITTEE.....	136
B. INFORMED CONCENT FORM.....	137
C. DEMOGRAPHIC INFORMATION FORM	138
D. SAMPLE ITEMS FROM TUCKMAN PROCRASTINATION SCALE	139
E. SAMPLE ITEMS FROM BASIC PSYCHOLOGICAL NEED SCALE.....	140
F. SAMPLE ITEMS FROM DEPRESSION ANXIETY AND STRESS SCALE	141
G. SAMPLE ITEMS FROM ROSENBERG SELF-ESTEEM SCALE	142
H. SAMPLE ITEMS FROM SELF-CONTROL SCHEDULE	143
I. CURRICULUM VITAE	144
J. TURKISH SUMMARY/TÜRKÇE ÖZET	146
K. TEZ FOTOKOPİSİ İZİN FORMU	177

LIST OF TABLES

Table 2.1 Four Perspectives of Procrastination	25
Table 3.1 Demographic Information of the Participants	51
Table 3.2 Fit Indices of TPS for the Present Study	54
Table 3.3 Unstandardized and Standardized Parameter Estimates, t Values and R ²	55
Table 3.4 Fit Indices of BPNS for the Present Study	58
Table 3.5 Fit Indices of DASS-42 Depression Subscale for the Present Study	62
Table 3.6 Fit Indices of RSES for the Present Study	65
Table 3.7 Fit Indices of SCS for the Present Study	68
Table 4.1 Indices of Normality for Study Variables	75
Table 4.2 Means, Standard Deviations and Intercorrelations for the Study Variables	78
Table 4.3 Summary of Goodness of Fit Statistics for the Proposed Model	80
Table 4.4 Regression Equations and Squared Multiple Correlation Coefficients (R ²) for the Proposed Model	84
Table 4.5 Bootstrapped Results of Total, Indirect, and Direct Estimates	85

LIST OF FIGURES

Figure 1.1 SDT Perspective of Energization and Direction of Action	7
Figure 1.2 The Hypothesized Model.....	14
Figure 2.1 Active Delay and Procrastination	23
Figure 3.1 Single factor CFA model of TPS with standardized estimates	54
Figure 3.2 Single factor CFA model of BPNS-AUT with standardized estimates.....	59
Figure 3.3 Single factor CFA model of BPNS-COM with standardized estimates.....	59
Figure 3.4 Single factor CFA model of BPNS-REL with standardized estimates.....	60
Figure 3.5 Single factor CFA model of DASS-42 depression subscale with standardized estimates.....	63
Figure 3.6 Single factor CFA model of RSES with standardized estimates...	66
Figure 3.7 Second-order comprised of three factors model of SCS with standardized estimates.....	69
Figure 4.1 Scatterplot matrix of all variables in the study	76
Figure 4.2 Scatter plot of predicted values and residuals.....	77
Figure 4.3 Standardized Path Coefficients for the Proposed Model	82

CHAPTER 1

INTRODUCTION

“If you put an avocado pit in a pot of earth it will probably grow into a tree, because it is in the nature of avocados to do that . . . [But for that to occur] they need sun; they need water; and they need the right temperatures. Those elements do not make trees grow, but they are the nutriments that the developing avocados need, that are necessary in order for the avocados to do what they do naturally.”

Deci and Flaste (1995, p. 98)

1.1 Background of the Study

Naturally, human beings are tend to have a lot of interests and pursue their interests in various ways. Procrastination is a curious aberration in which people fail to follow their interest in an efficient and productive manner. It is a dysfunction of abilities which are important for making contact with major or minor various tasks (Milgram, 1991).

Approximately one-fourth of the general population struggles with procrastination (Ferrari, 1994; Ferrari, Díaz-Morales, O'Callaghan, Díaz, & Argumedo, 2007) and it is almost universal among university students with consequences ranging from diminished academic achievement (Howell & Watson, 2007; Rothblum, Solomon, & Murakami, 1986) to severely increased stress and poor quality of life (Tice & Baumeister, 1997). Up to 70% of university students procrastinate (Schouwenburg, Lay, Pychyl, & Ferrari, 2004) and 50% of them procrastinate habitually (V. Day, Mensink, &

O'Sullivan, 2000; Ulukaya & Bilge, 2014; Uzun Özer, 2005). On the other hand, diminished academic achievement is not a certain consequence, there are also many studies which indicate that procrastination scores of students and their course grades are not related to each other (e.g. Csikszentmihalyi, 1990; Ferrari, 1992; Schraw, Wadkins, & Olafson, 2007; Solomon & Rothblum, 1984).

Over the last 40 years, many research regarding the causes, correlates, and consequences of procrastination has done. The procrastination literature has shed light on many related variables so far. Some of these are low conscientiousness and neuroticism (D. Lee, Kelly, & Edwards, 2006), depression (Solomon & Rothblum, 1984; Stöber & Joormann, 2001), boredom proneness (Blunt & Pychyl, 1998; Vodanovich & Rupp, 1999), task difficulty (Ackerman & Gross, 2005), low self-competence (Ferrari, 1991a), low self-esteem (Klassen, Krawchuk, & Rajani, 2008), and low self-control (Digdon & Howell, 2008; Uzun Özer, 2010). However, the causes of this problem and effective intervention ways are still not clear (Shams, 2017).

There is not a commonly shared theory framework for most of the procrastination studies (van Eerde, 2003) and research endeavors in various fields of psychology have basically developed in isolation of one another (Klingsieck, 2013). Also, due to various unique ways that each people experience procrastination, prediction rates of procrastination by various variables in the literature are generally low (changes from 5% to 35%) (e.g. Klassen et al., 2008; Pychyl, Coplan, & Reid, 2002; Uzun Özer, 2010). Several studies have showed that procrastinators are not a homogenous group (e.g. Ferrari, 1992; Schouwenburg, 1992). Some of them are more prone to emotional problems (McCown, Johnson, & Petzel, 1989) and pessimistic (Lay, 1987), while some others do not appear to be troubled and maintain optimistic regarding the future (Lay, 1988), and some others have a tendency to adjustment problems (McCown et al., 1989). Tibbett and Ferrari (2015, p.

175) ask for a picture of typical procrastinator that reflects another diversity: “Is the person lazy and unmotivated, or engaged in organizing their room, instead of studying? Does the person put off work for friends, parties, and social experiences, or become anxious at home and alone?”

Undoubtedly, delaying a task is a familiar experience for nearly all of us. It is an inherent part of human life so that almost everyone may experience it at certain times such as while organizing several tasks in importance order or to make some tough decisions (Ferrari, Johnson, & McCown, 1995). Despite its familiarity, however, it is not easy to distinguish productive or unproductive usage of this complex behavior. For example, even if it seems unproductive, in some way it may lead to creativity by prolonging incubation period (Cohen & Ferrari, 2010; Subotnik, Steiner, & Chakraborty, 1999; Torrance & Safter, 1990) like Leonardo Da Vinci’s procrastination in finishing painting Mona Lisa (Thomas, 2008). This ambivalent nature of procrastination makes it difficult to catch distinguishing characteristics of procrastinators. However, there are attempts to clarify it. Firstly Ferrari (1993, 1994) offered an intuitive distinction between functional and dysfunctional procrastination. That is, occasional delays of tasks are acceptable in some situations such as prioritizing tasks or waiting for additional information to be available. This may help to maximize the probability of task success. Thus, Ferrari (1993) has termed this form of procrastination as *functional*. For example, it can make sense to avoid studying for a time to rest and get motivated to study and finishing the task prior to the due date. It is functional.

On the other hand, habitual delays to start or complete intended tasks, which is called as *dysfunctional* procrastination, may be inappropriate and an obstacle to get an optimal level of task success (Ferrari, 1993). For example habitually spending a considerable time by watching TV to be able to avoid studying is dysfunctional.

Even though this distinction implies that delaying something might be used in a functional or dysfunctional way, dysfunctional procrastination was largely investigated by the researchers (e.g. Ferrari, 1994; Ferrari & Olivette, 1994; Flett, Blankstein, & Martin, 1995; Kutlesa, 1999; Sirois, 2007), most probably because it is the problematic area which has very serious costs to persons and societies. Thus, procrastination research was largely built on dysfunctional procrastination.

In order to counterbalance this negative view that has dominated procrastination research, Chu and Choi (2005) attempted to identify a new positive type of procrastination, namely “active procrastination”. According to the authors, procrastinators may prefer to study under pressure and choose to procrastinate deliberately. Although they may engage in the same level of procrastination as negative procrastinators, they may possess desirable behavioral characteristics (Chu & Choi, 2005). Thus, active procrastination is a rational and necessary delaying of a task resulting in positive outcomes (Chu & Choi, 2005). In response to this, the researchers (Pychyl, 2009; Tibbett & Ferrari, 2015) assert that the notion of active procrastination is an oxymoron (a combination of words that have opposite meanings) and procrastination is different from waiting. Because by definition, procrastination involves delay with negative consequences or it is at least accompanied by subjective discomfort (Pychyl, 2009). Ferrari (2011, p. 87) mentions that “Instead of typical waiting -taking time to gather resources to complete their next task-, chronic procrastinators actively find excuses or activities to occupy their time and justify not finishing the task at hand”. Researchers continued to pay attention distinguishing these two concepts, in some studies “active delay” term was offered instead of “active procrastination” (e.g. Corkin, Shirley, & Lindt, 2011; Schraw et al., 2007).

There is a clear aim in active delay, however the aim is not clear in the problematic delay or procrastination. Then, why do people continue to

procrastinate? May delaying have a functional part even if it seems totally unfunctional and harmful in procrastinators' life? There are some theoretical explanations in the related literature regarding the potential aims of procrastination. For example, according to Janis and Mann (1979) it is a mean of dealing with conflict as a defensive avoidance strategy. Defensive avoidance may occasionally be adaptive while dealing with conflicts, however it reduces one's chances of averting serious losses (Jaremko & Meichenbaum, 2013). Procrastination can be seen as the opposite of engagement, namely disengagement (Haghbin, McCaffrey, & Pychyl, 2012). This can be an emotional regulation strategy for coping with negative affect temporarily (Haghbin et al., 2012).

Several theorists (e.g. Burka & Yuen, 1983; Freud, 1953; Tice, 1991) agreed with the view that procrastination can be a way of self-protection which includes protection of fragile self-esteem. According to this point of view, performance is an indicator of ability which is also an indicator of self-worth. By delaying things until too late, the person may aim to avoid the shameful information that s/he is not able to achieve that task –which is much more shameful- and to attribute failure to other things, since hope for success is low and fear of failure is high (Covington & Beery, 1976). Therefore, in-depth understanding of the concept, procrastinators may suffer from a negative self-concept by mostly focusing on many negative attributes regarding themselves (Ferrari et al., 1995).

According to Self Determination Theory (SDT), a contemporary approach ongoing concern with the worth of the self is a byproduct of need deprivation or conflict (Ryan & Brown, 2003). On the contrary self-as-object perspective, the self is seen as a process. Therefore, the self is a process of assimilation and integration. There are a few number of studies examining procrastination from different aspects of SDT (Senécal, Julien, & Guay, 2003; Senécal, Koestner, & Vallerand, 1995). However, the basic concept of the theory, basic

psychological needs satisfaction, has not been studied yet as an antecedent of procrastination. It is hoped that SDT has potential to offer a new perspective of the possible aims of the procrastination to the related literature.

According to SDT, people have three core psychological needs, the need for autonomy, competence, and relatedness (Deci & Ryan, 2000). If at least one of these needs is not satisfied or neglected in a specific domain or in general, people will have motivational and psychological decrements such as decreased vitality, volition, integration, and well-being (Ryan & La Guardia, 2000). Thus, optimal human functioning includes satisfaction of them (Deci & Ryan, 2000, 2002).

The need for autonomy includes the degree to which the person feel that his/her actions are volitional, internally motivated; while competence need refers to the degree to which the person feels effective in their interactions with the social environment; and relatedness need refers the degree to feel connected to others and belongingness (Deci & Ryan, 2000). Many cross-cultural study showed that need satisfaction is vital for healthy development, engagement, motivation, and well-being (Gagné et al., 2015). The concept of needs (either physiological or psychological) identified the content of motivation and provided a vital ground for the energization and direction of action (Deci & Ryan, 2000). If people have a clear focus about what they do for their needs, then they can find and direct their energy toward some related action. If this process is blocked, procrastination may take place as a “substitute/compensatory behavior” (see Figure 1.1).

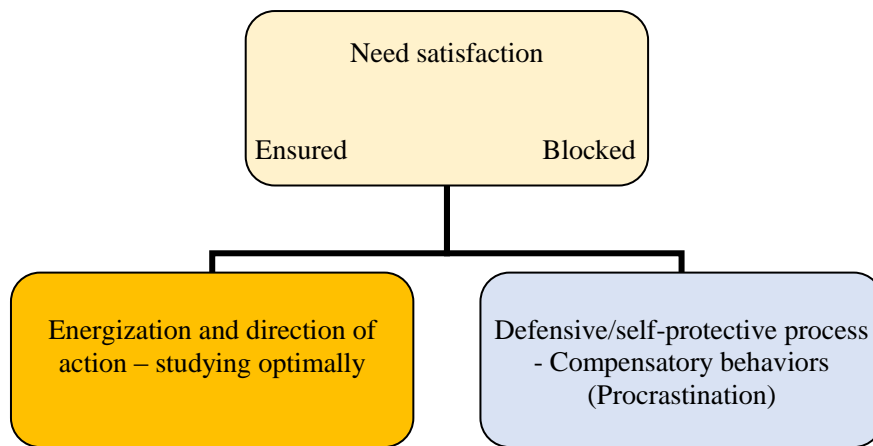


Figure 1.1 SDT Perspective of Energization and Direction of Action

SDT approach suggests that engaging interesting activities, exercising capacities and pursuing connectedness in social groups and integrating intrapsychic and interpersonal experiences into a relative unity are parts of the adaptive design of human organism (Deci & Ryan, 2000). To experience competence, relatedness and autonomy, either environmental support or the individuals' inner resources to support themselves including finding appropriate environmental resources are required. According to Deci and Ryan (2000), to the degree that the support is not provided internally and/or externally, the person will, to that degree, be replaced by self-protective ways (e.g. the tendency to withdraw concern for something/somebody) that no doubt have a function in nonsupportive contexts. These self-protective ways serve as compensatory motives for unfulfilled needs. Procrastination can be one of these ways.

While procrastinating, students engage in some replacement activities such as getting something to drink, watching TV, doing household tasks, talking with friends, surfing the internet, having a nap, doing less urgent schoolwork, going shopping, playing computer games etc. (Klassen et al., 2010). These simple and relevantly “easy to engage” activities may serve an aim to

compensate, even if not fully satisfy the needs in productive ways, some unmet needs. For example by playing computer games, first of all the person may engage/contact with something, and feel some competence. Indeed, procrastination –unable to engage with that task- occurs most often when a task is perceived as aversive/unpleasant (i.e. boring, frustrating, and lacking meaning and/or structure) (Blunt & Pychyl, 2000; Ferrari et al., 1995; Milgram, Sroloff, & Rosenbaum, 1988; Sirois & Pychyl, 2013). However, in the long term, since the related necessary need is not satisfied the person may live much more negative consequences due to procrastination (Sirois, 2007).

In the literature, one of the strong predictors of procrastination has been found as conscientiousness (D. Lee et al., 2006). In this study, the relationship between procrastination and two Big Five personality factors, neuroticism and conscientiousness were examined among academically-undecided college students. The results of the study indicated that greater neuroticism leads to lower conscientiousness which in turn leads to greater procrastination. In another study, perceived competence moderated the relationship between fear of failure and procrastination (Haghbin et al., 2012).

In a recent study, (Eckert, Ebert, Lehr, Sieland, & Berking, 2016) procrastination has been offered as a dysfunctional reaction to undesired affective states. The findings showed that the ability to tolerate aversive emotions mediated the relationship between emotion regulation skills and procrastination. Also it has promising results regarding treatment of procrastination by systematic training of the emotion regulation skills that includes tolerating and modifying aversive emotions. Furthermore, B. B. Chen and Qu (2017) mentioned that a fast life history strategy may be related to procrastination. They found that a slow life history strategy mediated the relationship between environmental unpredictability and procrastination.

In the literature, the view of procrastination as a self-control failure

have also received considerable empirical support and self-control is seen as one of the strongest predictors of procrastination (Ariely & Wertenbroch, 2002; Digdon & Howell, 2008; Ferrari & Tice, 2000; Klassen et al., 2008; van Eerde, 2003; Wolters, 2003). Self-control is to limit the impulses to engage in behaviors which have known cost to the self (e.g. binge eating, smoking, procrastinating) (Faber & Vohs, 2004; Metcalfe & Mischel, 1999). Rosenbaum and Jaffe (1983) stated that people acquire self-control skills that help them to effectively cope with various stressors during their lifetime. Individuals who have high level of self-control more probably delay immediate pleasure (Rosenbaum & Ben-Ari Smira, 1986). In a study conducted by Uzun Özer (2010), self-control was found to be a mediator between procrastination and self-esteem, frustration discomfort, irrational beliefs, academic self-efficacy.

Depression was also found as one of the highest associated construct with procrastination (Stöber & Joormann, 2001). Depressive state involves dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest or involvement, anhedonia and inertia (Lovibond & Lovibond, 1995). All of these symptoms make task completion difficult (Steel, 2007). Also, several researchers (e.g. Abramson, Metalsky, & Alloy, 1989; Peterson, Colvin, & Lin, 1992) argue that self-control and pessimism are strongly associated with depression both theoretically and empirically.

Based on all of these theoretical bases related to the relationship between various constructs and procrastination, the present study focused on predictors of procrastination in the SDT framework among university students. Since basic psychological need satisfaction is also associated with self-control and depression (Wei, Shaffer, Young, & Zakalik, 2005), and with self-esteem; the current study included self-esteem, depression and self-control as mediator variables in the model.

1.2 Purpose of the Study

The purpose of the current study was to test a model, based on self-determination theory, explaining the role of basic psychological needs satisfaction (autonomy, competence and relatedness) in predicting procrastination through the indirect effect of depression, self-esteem and self-control. Self-esteem and depression were also hypothesized to predict self-control. Thus, the main research question of the current study was:

To what extent the procrastination is explained by the proposed path model included basic psychological needs satisfaction (autonomy, competence, and relatedness), as mediated by depression, self-esteem and self-control?

1.3 The Hypothesized Path Model and Hypothesis

Procrastination might be estimated by person related variables and environmental variables (Ferrari et al., 1995). Additionally, the interaction of the self with the world is related to basic psychological needs satisfaction (Deci & Ryan, 2000). Thus, in this study basic psychological needs satisfaction (autonomy, competence and relatedness) as both person and environment related variable and depression, self-esteem and self-control as person related variables were involved in the current model of procrastination (Figure 1.2). Depression, self-esteem and self-control variables were mediators which self-esteem and depression were predictors of self-control.

In this direction, based on the main research question, the current study includes the following hypotheses. Abbreviations represent the following, ANS = Autonomy Need Satisfaction, CNS = Competence Need Satisfaction, and RNS = Relatedness Need Satisfaction.

Hypothesis 1: There will be a significant relationship between ANS and CNS (Path A).

Hypothesis 2: There will be a significant relationship between CNS and RNS (Path B).

Hypothesis 3: There will be a significant relationship between ANS and RNS (Path C).

Hypothesis 4: ANS will be associated with depression directly and significantly (Path D).

Hypothesis 5: ANS will be associated with self-control directly and significantly (Path E).

Hypothesis 6: ANS will be associated with self-esteem directly and significantly (Path F).

Hypothesis 7: CNS will be associated with procrastination directly and significantly (Path G).

Hypothesis 8: CNS will be associated with depression directly and significantly (Path H).

Hypothesis 9: CNS will be associated with self-control directly and significantly (Path I).

Hypothesis 10: CNS will be associated with self-esteem directly and significantly (Path J).

Hypothesis 11: RNS will be associated with depression directly and significantly (Path K).

Hypothesis 12: RNS will be associated with self-control directly and significantly (Path L).

Hypothesis 13: RNS will be associated with procrastination directly and significantly (Path M).

Hypothesis 14: RNS will be associated with self-esteem directly and significantly (Path N).

Hypothesis 15: Self-esteem will be associated with depression directly and significantly (Path O).

Hypothesis 16: Depression will be associated with self-control directly and significantly (Path P).

Hypothesis 17: Self-esteem will be associated with self-control directly and significantly (Path R).

Hypothesis 18: Depression will be associated with procrastination directly and significantly (Path S).

Hypothesis 19: Self-control will be associated with procrastination directly and significantly (Path T).

Hypothesis 20: ANS will be associated with depression through self-esteem significantly.

Hypothesis 21: CNS will be associated with depression through self-esteem significantly.

Hypothesis 22: RNS will be associated with depression through self-esteem significantly.

Hypothesis 23: ANS will be associated with self-control through both self-esteem and/or depression significantly.

Hypothesis 24: CNS will be associated with self-control through both self-esteem and/or depression significantly.

Hypothesis 25: RNS will be associated with self-control through both self-esteem and/or depression significantly.

Hypothesis 26: ANS will be associated with procrastination through self-esteem and/or depression and/or self-control significantly.

Hypothesis 27: CNS will be associated with procrastination through self-esteem and/or depression and/or self-control significantly.

Hypothesis 28: RNS will be associated with procrastination through self-esteem and/or depression and/or self-control significantly.

Hypothesis 29: Self-esteem will be associated with self-control through depression.

Hypothesis 30: Self-esteem will be associated with procrastination through depression and self-control significantly.

Hypothesis 31: Depression will be associated with procrastination through self-control significantly.

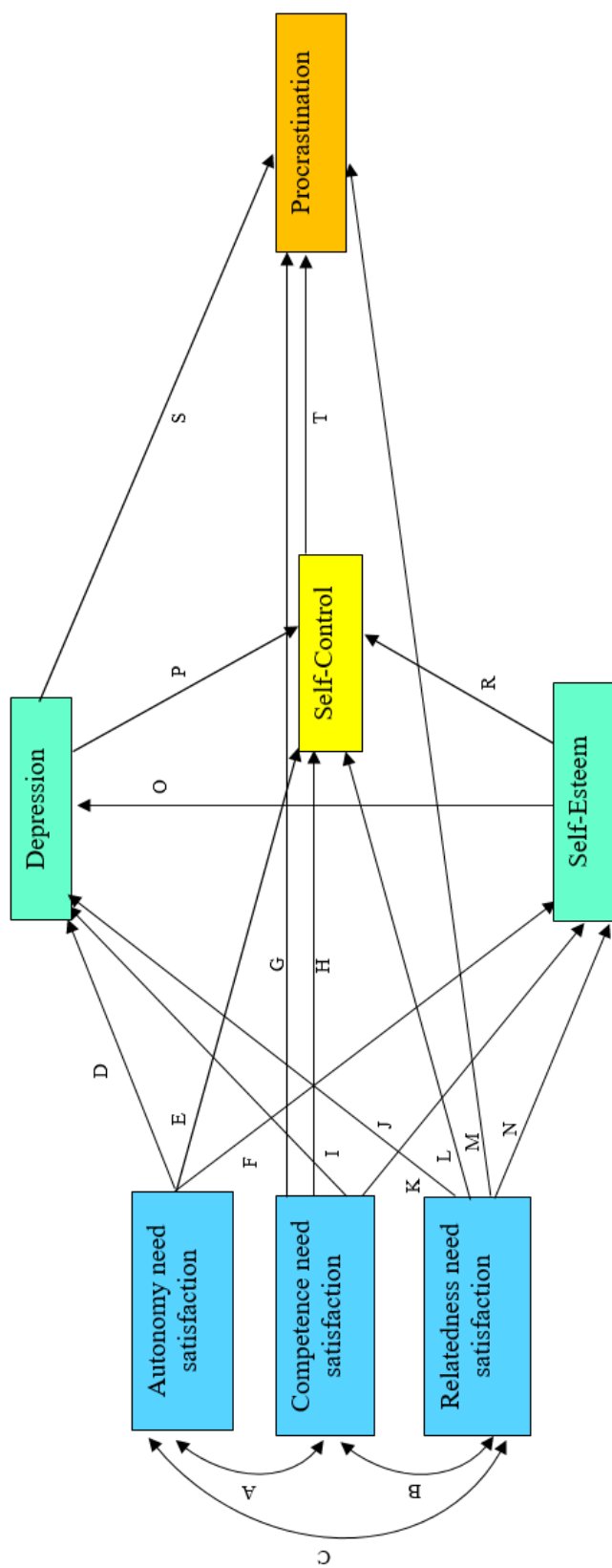


Figure 1.2 The Hypothesized Model

1.4 Significance of the Study

In a rapidly changing world, starting and accomplishing time-dependent tasks with various other responsibilities are becoming more and more difficult. Especially in university years, when students start to take more responsibilities about their own lives (Tuckman, 1991) Many students may suffer from balancing and organizing their needs including schoolwork, personal maintenance activities (i.e. eating, grooming, sleeping, cleaning, doing laundry, shopping), leisure activities (i.e. socializing, exercising, watching TV), and spiritual activities (Horne, 2000). In this process, continuous organization of activities is needed. In addition to this, abilities to fully engage with one task at a time and disengage when the task is accomplished are very important. Problems in engagement or disengagement of a task may have serious consequences.

Procrastination as a disengagement in starting and completing intended tasks is detrimental to subjective well-being (Pychyl & Little, 1998; Sirois, Melia-Gordon, & Pychyl, 2003). It is a universally unpleasant, debilitating, and persistent experience such that individuals usually experience it as foolish, shameful, harmful, undesirable, and unacceptable behavior (Briody, 1980; Rothblum et al., 1986; Schouwenburg et al., 2004; Wei et al., 2005). Although procrastination has 40 years of research background, researchers are still unclear about the causes and correlates of the construct and intervention strategies (Shams, 2017). That is, procrastination among university students still needs to be examined within the framework of new theoretical perspectives.

Procrastination is tiring and frustrating both for the procrastinator and the people around him/her (Pychyl & Little, 1998). Procrastinators are concerned with unrelated and pleasant activities instead of obviously necessary activities.

However, actually for procrastinators, even positive activities are no longer experienced as pleasant because of tension or guilt regarding disproportionate concern with the delayed action (Nieroba & Rist, 2011). For example, there are no clear boundaries between studying and leisure time. The person somehow thinks about studying, even while doing leisure activities. The higher education institutions are responsible for developing interventions and organizing university environment to respond various needs of students. If students become aware of their needs, to organize and to find ways of satisfying them, they will be ready to cope with not only academic responsibilities and challenges in the academic context, but also with general challenges of life.

Procrastination has a long research background that has few explanations (i.e. since it is a self-control problem) about why people continue to procrastinate in spite of being aware that negative consequences of it will outweigh positive ones (Haghbin et al., 2012; Janis & Mann, 1979; Tice, 1991). At this point, the need based point of view of Self-Determination Theory (SDT) may extend the current literature by approaching procrastination as a compensatory motive for unfulfilled basic psychological needs (Deci & Ryan, 2000).

The concept of needs (either physiological or psychological) identified the content of motivation and provided a vital ground for the energization and direction of action (Deci & Ryan, 2000). If the satisfaction of basic psychological needs are blocked, compensatory behaviors like procrastination may take place as a self-protective strategy (Deci & Ryan, 2000).

According to SDT perspective, internal conflicts make people ambivalent and confusing about where they direct their energy (Deci & Ryan, 2000). If a student complains about wanting to study but do not study, there are two conflicting internal sides which say that “Do it!” to meet some needs and “Delay it!” also for some other needs. Listening both sides is necessary to

understand all needs of the person at that specific time. This may make them satisfy their needs in balance by arranging their energy appropriately instead of suppressing and not listening to their conflicting internal sides.

The intervention programs generally pay attention to only “Do it!” side of procrastination by including time management strategies, changing irrational thoughts, conducting “Do It Now!” programs etc. (e.g. Ferrari, 2010; Haghbin et al., 2012; Knaus, 1998; Nordby, Wang, Dahl, & Svartdal, 2016; Uzun Özer, Demir, & Ferrari, 2013). In those programs, the focusing on person totally to eliminate delay of tasks may further polarize ambivalent nature of procrastination and internal conflicts. Only supporting “Do it!” part and ignoring the “Delay it!” part may lead to further resistance. Indeed, various intervention programs have limited effectiveness (Ellis & Knaus, 1979; Nordby et al., 2016; Solomon & Rothblum, 1984) and high relapse rates (Ferrari et al., 1995). As various research studies suggested merely efficient time management skill interventions do not work hence the cause of procrastination is not only the lack of time management skill (Beswick, Rothblum, & Mann, 1988; Ferrari, 1991b, 1991c, 1992, 1994; Lay, 1986). Thus, the results of the current study, which aims to test a model explaining the role of basic psychological needs satisfaction (autonomy, competence and relatedness) in predicting procrastination through the indirect effect of depression, self-esteem and self-control, might provide a worthwhile information to practitioners regarding paying attention to internal conflicts of the clients.

Even if procrastination seems totally aimless and not functional, it may have an aim that deserves to be respected. The causes and treatment options can be found by respecting and then exploring that aim. Delaying is just a behavior. Both active delayers and procrastinators delay, but in different ways. Procrastinators do not have to give up delaying totally. Instead of using delay as excuses to justify not finishing the tasks at hand, they can learn to use it in

appropriate contexts. It is vital to study the aim of procrastination in order to support students to get accept, respect and understand their problematic delaying behavior. There are limited number of studies examining procrastination from different aspects of SDT among university students (Çavuşoğlu & Karataş, 2015; Senécal et al., 2003; Senécal et al., 1995). Thus, the present study is also significant in terms of investigating the aim of procrastination as to compensate unsatisfied three basic psychological needs in balance with a need based, SDT perspective.

In addition, effective usages of delay lead to success, well-being and happiness while ineffective usages lead to reasonably increased stress and poor quality of life (Tice & Baumeister, 1997). In other words, using it with a clear aim is functional. Then the problem is not delaying behavior itself. Instead, the problem is lack of internal and/or external support to satisfy the needs (Deci & Ryan, 2000). Based on this insight, the current study may also provide a worthwhile knowledge for practitioners on the point of developing interventions to promote internal and external support systems.

To sum up, this study, by making use of self-determination theory, attempted to test person related and both person and environment related factors in predicting procrastination. The results of the current study may guide practitioners in designing effective intervention and training programs which include increasing awareness about the functions of delaying behavior and discovering what they need to do to follow their interest in an efficient way, and how they may engage and disengage with tasks in balance.

1.5 Definition of the Terms

The definitions of the terms which are used through the current study were given below in order to enable readers understand the overall study.

Autonomy need satisfaction: The degree to which the person feel that his/her actions are volitional, internally motivated (Deci & Ryan, 2000).

Competence need satisfaction: The extend to which the person feels effective in his/her interactions with the social environment (Deci & Ryan, 2000).

Relatedness need satisfaction: The degree to feel connected to others and belongingness (Deci & Ryan, 2000).

Depression: Depressive state which involves dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest or involvement, anhedonia and inertia (Lovibond & Lovibond, 1995).

Self-esteem: The entire thoughts and feelings of the individual with reference to herself as an object (Rosenberg, 1965).

Self-control: Limiting the impulses to engage in behaviors that have known cost to the self (Metcalf & Mischel, 1999).

Procrastination: The act of needlessly delaying tasks to the point of feeling subjective discomfort (Solomon & Rothblum, 1984).

CHAPTER 2

REVIEW OF THE LITERATURE

This chapter includes the review of the related literature. Firstly, the definitions and theoretical background of procrastination were explained. Then, theoretical framework of the current study was provided. Subsequently, the related literature on the proposed model variables which are basic psychological needs satisfaction, self-esteem, depression, self-control were presented. The chapter ends with the summary.

2.1 Definitions of Procrastination

Procrastination, is a strange phenomenon (J. H. Anderson, 2016). The alarm bell rings to study, one hears it, gets alarmed, wants to study and is aware of the potential negative consequences they will face if they delay, nevertheless, they may still delay. Various definitions and conceptualizations for procrastination can be found in the literature.

In one of the early attempts, Ellis and Knaus (1979, pp. 1-2) mentioned that procrastination is a failure of self-regulation. And also, they emphasized it is irrational/illogical and has destructive effects on human beings and said that:

Does no one care? Will no one lift a finger to help rid the world of this destructive aspect of slothfulness? Fortunately, we do and will. For we don't like procrastination. It adds little to and it subtracts a lot from joyous autonomous living. We don't see it as the worst emotional plague imaginable, but we view it as a dangerous disadvantage. Part of the human condition –yes– but a nasty, unattractive part. And one that merits extirpation.

Similarly, according to Silver and Sabini (1981) procrastination is a riddle for the concept of self-control such that the procrastinator is someone who knows what she wants to do, is able to do it, is struggling to do it, yet cannot do it. With a similar sentiment, Solomon and Rothblum (1984, p. 503) defined it as “the act of needlessly delaying tasks to the point of experiencing subjective discomfort”. Again, Solomon and Rothblum (1984) emphasized the disruptive effect of procrastination on psychological health in definition of it.

In spite of this base of procrastination which put forward procrastination as 1) self-control failure, 2) irrational, 3) voluntary, 4) disruptive to psychological health, in the following years many definitions were made to clarify the construct. Because, there was another point needed to be considered: “Procrastination does not always result in inefficiency or substandard behaviors” (Ferrari et al., 1995, p. 11).

Ferrari et al. (1995) said that sometimes procrastination can be efficient and they made the first attempt to offer an intuitive distinction between functional and dysfunctional procrastination (Ferrari, 1993, 1994). Years later, Chu and Choi (2005) offered a new positive type of procrastination which is called active procrastination. However, Pychyl (2009) and Ferrari (2010) argued that the previously mentioned functional procrastination by Ferrari et al. (1995) was not procrastination, it was delay which is different from procrastination. Therefore, according to them procrastination is not an adaptive behavior. Besides, Pychyl (2009) mentioned that procrastination is a self-regulatory failure like problem drinking, compulsive gambling or shopping, and over-eating, it is not appropriate putting the adverb “active” in front of neither procrastination nor these concepts to describe some positive aspect of the behavior. For example there is no concept like active over-eating, however there is healthy eating (e.g. Kennedy, Ohls, Carlson, & Fleming, 1995; Willett et al., 1995). Although both over-eating and eating concepts are based on

eating behavior, over-eating is used to define problematic eating. Like that both procrastination and delaying include delaying behavior as a base, and procrastination is the problematic version. However, surely there can be active delaying like active forms of other concepts sensible drinking (e.g. P. Anderson, 1996; Edwards, 1996), healthful shopping (e.g. Hollywood et al., 2013), and even healthy gambling (e.g. Raeburn, 2001).

Indeed Corkin et al. (2011) showed that active delay exists and is different from procrastination, some adaptive self-regulatory processes and also academic achievement are positively associated with it. Delaying may work for taking time to gather resources and to complete the next task (Tibbett & Ferrari, 2015). Therefore, active delay has a clear aim.

On the contrary, yet only a few study investigated the aim of procrastination (e.g. Haghbin et al., 2012; Janis & Mann, 1979; Tice, 1991). For example, Janis and Mann (1979) mentioned that procrastination is a mean of dealing with internal conflict as a defensive avoidance strategy. Similarly, Haghbin et al. (2012) said that it may be an emotional regulation strategy for coping with negative affect temporarily. Also it is seen as a protection of fragile self-esteem (Tice, 1991). All of these are presented in Figure 2.1 as a whole for the clarity of understanding.

Finally, a recent study analyzed frequently cited seven procrastination definitions by decomposing them into their parts and then filtered the resulting parts, and extended the definition of procrastination as: “The voluntary delay of an intended and necessary and/or [personally] important activity, despite expecting potential negative consequences that outweigh the positive consequences of the delay.” (Klingsieck, 2013, p. 26). In sum, procrastination and active delay are different in terms of the functions they serve, however

while the function of active delay is clearly known, the function of procrastination has been still searched.

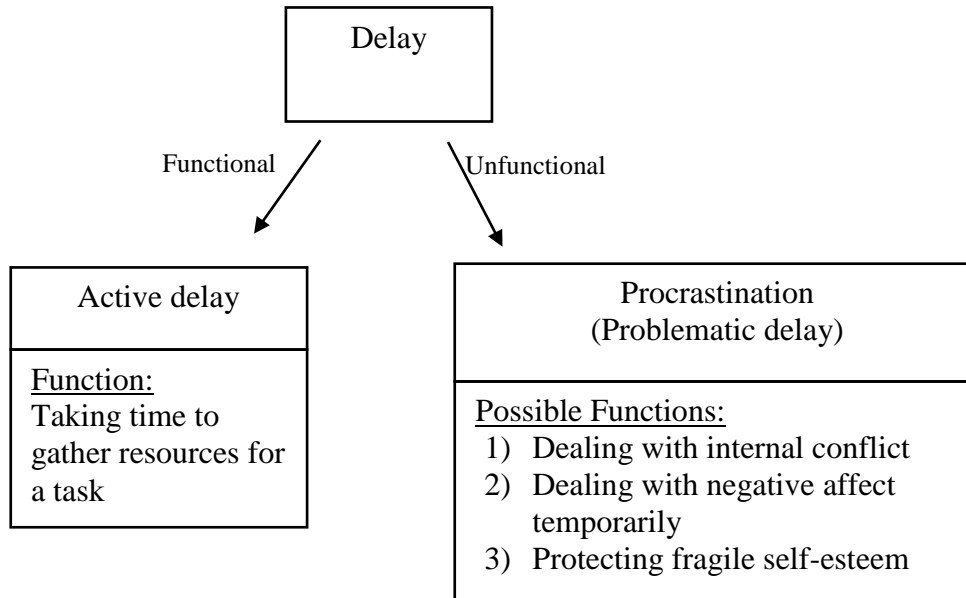


Figure 2.1 Active Delay and Procrastination

2.2 Theoretical Models of Procrastination

Research in the area of procrastination has proposed various different models to account for the development of and mechanisms that contribute to procrastination. Thus, there is not a commonly shared theory framework among procrastination studies (van Eerde, 2003). From psychoanalytic approach (Freud, 1953) to flow theory (Mendelson, 2007), there are many theoretical models related to it. For instance, some researchers have treated procrastination as a personality trait, some as a learned behavior, while others as a protection of fragile self-esteem, or a self-regulation problem. In an attempt to systemize many theoretical approaches, recently, Klingsieck (2013) grouped different understandings of procrastination into four perspectives as 1)

the differential psychology perspective, 2) the motivational and volitional psychology perspective, 3) the clinical psychology perspective, and 4) the situational perspective. For each perspective, informations are given in the Table 2.1.

Table 2.1

Four Perspectives of Procrastination (Klingsieck, 2013, p. 29) (Printed with permission)

	Differential psychology perspective	Motivational and volitional psychology perspective	Clinical psychology perspective	Situational perspective
Understanding procrastination as...	a trait	a motivational or/ end volitional deficit	a clinically relevant phenomenon	being evoked by certain situational factors
Theories that have been referred to in order to explain procrastination:	(Big five)	Self-Determination Theory Temporal Motivation Theory Action-Control Theory	Psychoanalysis Cognitive-Behaviorism Neuropsychology	-
Examples of variables that have been associated with procrastination in studies:	Conscientiousness Neuroticism Perfectionism	Intrinsic motivation Goal orientation, Self-regulation Time-management	Anxiety Depression Stress	Task difficulty Task attractiveness Task specificity

Regarding the systematization, it must be taken into account that there are some overlaps between the four perspectives and surely one perspective alone cannot explain procrastination comprehensively (Klingsieck, 2013). For example, while the differential psychology perspective conceptualizes procrastination as a stable personality trait, the motivational and volitional psychology perspective conceptualizes it as a failure of motivation and volition that may include stable personality traits, modifiable person related variables, environmental variables, etc. In addition, clinical psychology perspective may include similar variables with a basis of pathology. Lastly, situational perspective mainly focused on situational factors, but it can also include other person related factors since, to a great extent personal aspects determine how a situation is perceived (Klingsieck, 2013). In this direction, as Klingsieck (2013) mentioned, the dynamic of procrastination can be understood fully by the combination of different perspectives, such as the studies that investigate the interaction between personal and situational variables (e.g. Lay, 1992; Sigall, Kruglanski, & Fyock, 2000) or dynamic models of motivation (e.g. Steel & König, 2006; Vancouver, Weinhardt, & Schmidt, 2010).

2.2.1 The Differential Psychology Perspective

This perspective sees procrastination as a personality trait and focuses on the relationship between procrastination and personality traits, temperamental and personological variables (e.g. intelligence, ability, IQ, interests, self-esteem) (Klingsieck, 2013). Personality traits are relatively enduring characteristics of an individual which makes them respond to environmental stimuli in a consistent pattern (Spielberger, 1972). Models of procrastination on the base of personality traits are related to two basic models of personality: the three factor model of Eysenck and Eysenck (1985) -extraversion, psychoticism, and neuroticism- and five-factor model of Costa and McCrae (1992) -neuroticism, extraversion, openness, conscientiousness and agreeableness.

With the three factor model, extraversion and procrastination had a linear relationship, while procrastination and neuroticism had a curvilinear relationship (McCown et al., 1989). That is high extraversion and both the low and high neuroticism people have higher procrastination. On the other hand, regarding the five-factor model, Costa and McCrae (1992) mentioned that low conscientiousness and neuroticism were related to procrastination.

Similarly, Schouwenburg and Lay (1995) propose trait procrastination as a predisposition to engage in dilatory behavior. In their model, the sources of high trait procrastination within the five-factor personality structure are also low conscientiousness and high neuroticism. Besides, Schouwenburg and Lay (1995) emphasized that trait adjectives highly related to trait procrastination include ‘undisciplined’, ‘lazy’, and ‘disorderly’ which are characterized by the Big-five dimension conscientiousness negatively.

Lay, Kovacs, and Danto (1998) also followed Costa and McCrae’s road and supported the proposition that the source of trait procrastination is low conscientiousness and they revealed that this begins in childhood. That is, procrastination may be an early established pattern. In a further study, Watson (2001) improved this single dimension trait model of procrastination to a complex trait model which includes several component antecedents. Task aversiveness was found strongly associated with low conscientiousness and neuroticism.

In another model, D. Lee et al. (2006) offered conscientiousness as a mediator between neuroticism and procrastination (D. Lee et al., 2006). Therefore, within the personality trait perspective, many models of procrastination revealed the role of extraversion, conscientiousness and neuroticism. On the other hand, within this perspective, there was not found a relationship between intelligence and procrastination (Steel, 2007). In furtherance to these, in a

meta-analysis, conscientiousness predicted academic performance as largely independent of intelligence (Poropat, 2009). That is, procrastination may even occur in highly intelligent people. Besides, higher ability students procrastinate more than lower ability students (Ferrari, 1991c). These results imply that procrastination may have less effect on performance of successful students or maybe it can be functional in making the person better use of his study time (Brinthaupt & Shin, 2001; Csikszentmihalyi, 1990).

The relationship between self-esteem and procrastination has also received considerable attention in the related literature (e.g. B. L. Beck, Koons, & Milgrim, 2000; Ferrari, 1991c, 1994; Solomon & Rothblum, 1984). Several theorists (e.g. Burka & Yuen, 1983; Freud, 1953; Tice, 1991) agreed with the model that procrastination is a way of self-protection which include protecting fragile self-esteem. Put it differently, procrastination is seen associated with self-handicapping as a strategy to secure one's self-esteem (Ferrari, 1991c). Performance is seen as an indicator of ability which is also an indicator of self-worth. Thus, in-depth understanding of it, procrastinators suffer from a negative self-concept which involves many negative attributes to self (Ferrari et al., 1995).

Ferrari et al. (1995) offered another model of procrastination and adjustment that includes the formation of self-concept as an antecedent to procrastination. According to this model, the roots of procrastination are based on an early sense of uncertainty which originates from early attachment experiences (Ferrari et al., 1995). That is, procrastination is related to both types of insecure attachment (avoidant and anxious/ambivalent) and absence of a secure attachment style (Ferrari & Olivette, 1993; Hazan & Shaver, 1990; Lay, 1986). Besides, over the ground of uncertainty, procrastinators seek negative social comparison information which in turn may be damaging to the self by lowering self-esteem, evaluating the self harshly and developing a characterological

tendency to be avoidant (Marsh & Parker, 1984). In other words, avoidance takes place as a predominant way of dealing with stressful situations. The literature pointed out that in this process, optimism makes a difference that the optimistic procrastinators are relatively invulnerable to adjustment problems, while the pessimistic procrastinators are highly vulnerable (Lay, 1988).

2.2.2 The Motivational and Volitional Psychology Perspective

The models of procrastination within this perspective approach procrastination as a failure of motivation and/or self-control. Based on Self-Determination Theory, Senécal et al. (1995) proposed a model that procrastination is a motivational problem that involves more than personality traits and poor time management skills. According to them, students with intrinsic reasons for pursuing academic tasks procrastinate less than the students with external regulation and amotivation. Similarly, E. Lee (2005) asserted that procrastination is related to lack of self-determined motivation and low incidence of flow state. That is, procrastination is less likely to occur for flow-enacting (E. Lee, 2005; Seo, 2011), self-determined (E. Lee, 2005; Senécal et al., 1995) and intrinsically motivated (Katz, Eilot, & Nevo, 2014) activities.

On the other hand, Brownlow and Reasinger (2000) improved these models and proposed a combined model of procrastination with both motivational (intrinsic and extrinsic motivation) and stable personality factors (fear of failure, perfectionism, and locus of control). They mentioned that low extrinsic motivation with perfectionism and both external locus of control and attributional style leads to procrastination.

Based on Action Control Theory, Blunt and Pychyl (2000) offered project enjoyment as oppose to task aversiveness and its importance on the maintenance of motivation. Boredom, frustration and resentment emerge as a

result of lack of enjoyment in projects which includes inception, planning, action and termination. In addition, maintenance of motivation can be affected by other dimensions of personal projects such as importance, self-identity, control, difficulty, outcome, stress, and challenge.

Lastly, based on Temporal Motivation Theory, Steel and König (2006) developed a procrastination model that is composed of four major construct: expectancy, value, impulsiveness, and delay. That is: $\text{Motivation} = (\text{expectancy} \times \text{value}) / (\text{impulsiveness} \text{ and } \text{delay})$. If the outcome of an unpleasant activity will be come in the distant future, most probably procrastination may occur.

2.2.3 The Clinical Psychology Perspective

This perspective focuses on the conditions of and treatment for the clinically relevant extent of procrastination (e.g. Nieroba & Rist, 2011; Schouwenburg et al., 2004). Within this perspective, Ferrari et al. (1995) offered a model of procrastination as a pathological form of delay which is characterized by disproportionately detailed mental preoccupation with the delayed action that may lead to serious professional and personal problems. In a further model that improved the model of Ferrari, Nieroba and Rist (2011) proposed that the mixing of leisure and study time that generally results in a situation in which even positive activities are no longer experienced as pleasant, because of tension or a guilty conscience regarding disproportionate concern with the delayed action.

That is impossible to establish a clear-cut boundary between healthy and pathologic experience, phenomena of suffering lies in a continuum rather than a category (APA, 2006; Barron, 1998). All experiences and all relationships have multiple dimensions and depending on the moments in life, everybody can have a narcissistic, depressive, borderline, psychotic etc. dimension. Also,

under different thresholds that are unique to each person, under certain historical and social circumstances, various type of experience may occur (Barron, 1998). According to Ferrari et al. (1995), although Cluster B personality disorders (antisocial and narcissistic disorders) and Cluster C personality disorders (passive aggressive and obsessive-compulsive personality disorders) were found positively related to procrastination, researchers mentioned that an underlying shared factor can be lack of conscientiousness (Ferrari et al., 1995).

To conceptualize, assess and treat procrastination as a psychological disorder, a clinically relevant definition and criteria are needed (Klingsieck, 2013). In this regard, Engberding, Frings, Höcker, Wolf, and Rist (2011) suggested some criteria based on a case definition. According to them, procrastination can be classified as clinically relevant, if its duration is more than six months, its intensity is more than half of the day, and there are at least five physical and psychological complaints.

However, these criteria are vague and also conceptualizing procrastination as a disorder might be considered carefully. Since, it requires sensitivity not to polarize the concept as completely unhealthy, hence negative perception and stigmatization of the concept (For example, sometimes procrastination is seen as a characteristic quality of the individual more generally (e.g., “he is lazy”) (Ferrari & Pychyl, 2012)) makes it already difficult to understand the nature of procrastination (Klingsieck, 2013). Therefore, approaching it with negative adjectives (e.g. laziness, irresponsible) may not be a helpful explanation neither theoretically nor practically.

From a different point of view, Ferrari and Olivette (1994) also offered another model, they mentioned that procrastination may be a passive-aggressive way to rebel against authority. Besides, according to Rational Emotive Behavioral

Theory (REBT), people are born with self-defeating tendencies, and with either rational or irrational beliefs they get emotional, behavioral and cognitive consequences (Ellis, 1995; Ellis & Knaus, 1979). As a treatment method based on REBT, helping clients construct discomfort tolerance and rational beliefs related to their unique procrastination may make them replace procrastination with task engagement (Dryden, 2012).

2.2.4 The Situational Perspective

In contrast to other two aforementioned perspectives, in which person is the focus of explanation, the situational perspective focus on the situation/context (Klingsieck, 2013). According to this perspective, procrastination is taken as a construct that is evoked by certain situational factors such as task difficulty and attractiveness (Milgram et al., 1988; Senécal et al., 1995), regarding the course unclear directions, deadlines, lack of incentives and teachers' characteristics (Schraw et al., 2007). For example when teacher does not provide enough information regarding the content and the structure of the course, and if there are unclear quality standards for assignments, unclear criteria for grading and tentative due dates, the students are frustrated and procrastination is more likely occur in these situations. According to Schraw et al. (2007) deadlines help students organize their time efficiently, especially for chronic procrastinators, organized their academic life around deadlines. They are mentioned that "Deadlines really motivate you to do your best in a short period of time." and also they planned study periods to fall shortly before deadlines to optimize motivation while minimizing the amount of time invested in a study. That is, the left time may be used for whatever they like to do which may serve to satisfy many other needs.

In another point of view, behavioral learning theory sees procrastination as a form of avoidance or escape conditioning to an aversive stimulus (Ferrari et al.,

1995). In a study which is carried out by Solomon and Rothblum (1984), the frequency and the reasons of procrastination were investigated with 342 university students and most accounted (25%) reason was found as aversiveness/unpleasantness of the task. In furtherance, Senécal et al. (1995) also showed that delaying aversive (boring/difficult) activity is a central aspect of procrastination. In addition, learning theory asserted that procrastination may develop when either the delaying behavior is rewarded or not punished sufficiently (Ferrari et al., 1995).

2.3 Self-Determination Theory

Applying new perspectives to current problems can open up fresh conceptualization ways and intervention options. Procrastination has a long research background which have a few explanations for why people continue to procrastinate in spite of being aware that negative consequences of it will outweigh positive ones (Haghbin et al., 2012; Janis & Mann, 1979; Tice, 1991). Thus, maybe procrastination concept can be better understood if there may be found other explanations for knowing the outweighing negative consequences over positive ones and continuing to delay problematically. The need based point of view of Self-Determination Theory (SDT) may provide a new perspective here by approaching procrastination as a compensatory motive for unfulfilled basic psychological needs. SDT implies that procrastination may be a survival/self-protection strategy (Deci & Ryan, 2000).

The starting point for Self-Determination Theory (SDT) – which is based on the organismic-dialectical metatheory- is that “humans are active and growth oriented organisms who are naturally inclined toward integration of their psychic elements into a unified sense of self and integration of themselves into larger social structures” (Deci & Ryan, 2000, p. 229). SDT takes needs as innate psychological nutrients that are basic for continuing psychological growth, integrity, well-being and most effective functioning is related to

satisfaction of these needs (Deci & Ryan, 2000). In other words, engaging with interesting activities, testing their capacities and staying connected with groups are essential basis of human beings.

For experiencing competence, relatedness, and autonomy, environmental support is needed (Deci & Ryan, 2002). Environmental and individual differences which support satisfaction of these needs facilitate natural growth process. This process functions optimally when the support is immediately present or the person has inner resources to find required support (Deci & Ryan, 2000). To the degree that these processes are hindered by non-favorable conditions -excessively controlling, over-challenging or rejecting-, to that degree they will be supplanted by alternative self-protective processes (Deci & Ryan, 2002). Under non-supportive environments, these alternative processes have functional utility. Deci and Ryan (2000, p. 229) mentioned that: “These processes would include the capacity to compartmentalize rather than integrate psychological structures, the tendency to withdraw concern for others and focus on oneself, or in more extreme cases to engage in psychological withdrawal or antisocial activity as compensatory motives for unfulfilled needs”. Thus, procrastination can also be a compensatory motive for unfulfilled needs.

If a person has a clear awareness about his needs and focus on what he can do to satisfy them, then he can find and direct his energy toward some related action. If this process is blocked, procrastination may take place as a substitute/compensatory behavior. Then, people may fail to pursue their interest or even may not know their interest (Milgram, 1991).

In this direction, the person may not able to act in accordance with his actual need and potentialities while procrastinating (Yontef, 1993). Although this

point takes some place in the related literature, actual need and potentialities of the individuals and satisfaction of each of them in balance were neglected.

SDT is the theoretical framework of the current study. The anticipation in this study was that SDT theoretical framework will combine different perspectives into a new whole by approaching procrastination as the best way the person knows to do and can do at that time to compensate his/her unsatisfied basic psychological needs.

2.4 Procrastination and Related Variables

From early investigators to contemporary researchers, procrastination was found to be associated with frustration intolerance (Ellis & Knaus, 1979; Harrington, 2005), irrational beliefs (Balkis, Duru, & Bulus, 2013; Ellis & Knaus, 1979), perfectionism (Flett, Blankstein, Hewitt, & Koledin, 1992; Stöber & Joormann, 2001), conscientiousness and neuroticism (D. Lee et al., 2006), depression (Solomon & Rothblum, 1984; Stöber & Joormann, 2001); test anxiety (Flett et al., 1995; Stöber & Joormann, 2001); and stress (Sirois, 2007; Tice & Baumeister, 1997).

Also, it was found to be related to evaluation anxiety (Solomon & Rothblum, 1984), decision making difficulties (Ferrari & Olivette, 1993), overly perfectionistic standards about competency, and fear of the consequences of success and lack of assertion (Burka & Yuen, 1983), self-oriented perfectionism (Seo, 2011), fear of failure and low self-competence (Ferrari, 1991a), low self-esteem (Klassen et al., 2008), low self-control (Digdon & Howell, 2008; Uzun Özer, 2010), low self-efficacy to self-regulate (Klassen et al., 2008).

In addition, procrastination was found to be associated with goal orientations (Howell & Watson, 2007), task difficulty (Ackerman & Gross, 2005), low

project enjoyment (Blunt & Pychyl, 2000), boredom proneness (Blunt & Pychyl, 1998; Vodanovich & Rupp, 1999), rumination (Cohen & Ferrari, 2010) and regret (Ferrari, Barnes, & Steel, 2009). Lastly, paradoxically procrastination was also found related to creativity (Cohen & Ferrari, 2010).

2.5 Procrastination and Its Relation with Basic Psychological Needs Satisfaction, Depression, Self-Esteem and Self-Control

In this part, literature review about the related variables of procrastination was presented for the current study. Firstly, definition of three basic psychological needs and related studies were provided. Then, depression and its relationship with procrastination was explained. Thirdly, self-esteem was described in relation to procrastination. Finally, self-control and related studies were presented.

2.5.1 Basic Psychological Needs Satisfaction (BPNS)

According to SDT, autonomy, competence, relatedness are the three basic psychological needs of human beings (Deci & Ryan, 2002). Autonomy need satisfaction is defined as the extent to which the person feel that his actions are volitional and internally motivated (Deci & Ryan, 2000). The degree to which the person feels effective in their interactions with the social environment is the definition of competence need satisfaction, while relatedness need satisfaction is defined as the degree to feel connected to others and belongingness (Deci & Flaste, 1995; Deci & Ryan, 2000). All of the basic psychological needs can be satisfied with engaging in various behaviors which may be different among individuals and cultures.

BPNS is vital for optimal human functioning (Deci & Ryan, 2000, 2002). In the framework of Self Determination Theory (SDT), when any of these needs

is frustrated or neglected, people will have motivational and psychological decrements such as decreased vitality, volition, integration, and well-being (Ryan & La Guardia, 2000). According to this perspective, people act in the direction of increased psychological differentiation and integration in terms of their capacities, their valuing processes and their social connectedness (Deci & Ryan, 2000). The actions are not necessarily consciously intended to satisfy the basic needs, for example children do not play to feel competent deliberately, but such kinds of curiosity-based exploration, openness to sensory experiences of nature, and assimilation of values extant in one's social environment satisfy the basic needs.

On the other hand, especially when there is little satisfaction of a need, many behaviors are purposefully designed to satisfy the need (Deci & Flaste, 1995). For example, when lonely, people may explicitly seek out companionship; when feeling ineffective, people may explicitly work to become more competent or when controlled, people may explicitly seek out autonomy (Deci & Ryan, 2000). If a physiological need is thwarted, people put effort as soon as possible to satisfy it. For example when hungry enough, people can only think about finding a way to satisfy the hunger and have difficulty to engage in other things. However for psychological needs, people can make some accommodations that lessen their direct efforts to satisfy needs by developing defenses and need substitutes/compensatory motives which in turn lead to further and further thwarting of the satisfaction of the need (Deci & Ryan, 2000). And, over the years, this repetitive thwarting may result in a fixed pattern.

In this direction, people become either controlled (complying or defying) or amotivated (being out of control or acting helpless) and all these compensatory motives become self-perpetuating and bring negative consequences regarding

vitality, health and integrity (Deci & Ryan, 2000). This approach can be applied to procrastination concept.

SDT is based on most directly to the study of White (1959) which suggests that master reinforce for humans is the sense of competence. Competence includes the degree to which the person feels effective in their interactions with the social environment and this may imply that if the person has a high degree of competence in his interactions, he can organize the environment appropriately enough to reach resources for satisfying his needs. Indeed, SDT assumes that innate, psychological needs are regulatory or interactive styles (Deci & Ryan, 2000; Ryan & Deci, 2000a). Thus, ongoing interaction between the person's needs and his available social context is organized by the way people orient toward the environment. If the person's interactive style is adaptable to his specific environment, which he orients and organizes appropriately to oneself, enough as he can satisfy his needs.

In SDT, autonomy, competence, and relatedness are considered as necessary nutrients for well-being –vitality and self-actualization– (Ryan & Deci, 2000a). According to this, the experience of satisfaction of BPNS leads to well-being and the absence of it leads to depression, anxiety and somatic symptoms. In the study of Wei et al. (2005) which is conducted with 299 undergraduates, basic psychological needs satisfaction partially mediated the relationship between attachment anxiety and shame, depression, and loneliness; and fully mediated the relationship between attachment avoidance and shame, depression, and loneliness.

Up to now, in the literature, there has been just one attempt to examine the relationship between BPNS and procrastination. In the study which is conducted by Çavuşoğlu and Karataş (2015) with 583 undergraduate students, it was revealed that procrastination is indirectly related with basic

psychological needs through academic motivation –amotivation and intrinsic motivation. To put it more explicitly, amotivation decreases and intrinsic motivation increases when a person takes enough support to be able to satisfy his basic psychological needs which in turn decreases procrastination. Thus, there is a need to further studies to investigate the role of basic psychological needs satisfaction on procrastination with a new point of view in the framework of SDT, which is the starting point of the current research. In the current study, the question whether BPNS predicts procrastination through depression, self-esteem and self-control is investigated. Finding whether needs satisfaction as a promising underlying mechanism for procrastination may be a valuable contribution to procrastination literature.

2.5.2 Depression

Depression is defined as a state which involves dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest or involvement, anhedonia and inertia (Lovibond & Lovibond, 1995). Basically, A. T. Beck (1967) offers cognitive model of depression that shows that underlying vulnerability to depression is related negativistic thinking that includes perceiving the self, world, and future in negative ways.

In addition, in depression behaviorally there occurs withdrawing from social activities, reducing typical behaviors, and motor behavior changes such as speech with monotone voice, fewer words, less eye contact (Hammen & Watkins, 2013; Sobin & Sackeim, 1997). There may also be changes in appetite, sleep, lacking the physical stamina to undertake or complete tasks (Hammen & Watkins, 2013). Thus, there can be various kinds of unsatisfied needs including physical ones in depression.

On the other hand, in spite of its negative symptoms, evolutionary perspective sees depression as a survival mechanism by investigating the question “What is the function of depressive adjustment?” and it is suggested that low mood provides a protection for an individual (Price, 1967). That is, when a person loses interest in the next step of his life, he does not fight for it and is not hurt or killed. Therefore, if a person does not have functional life strategy, depression saves energy by decreasing worthless actions toward inaccessible goals (Price, 1967).

Several empirical findings revealed that learned helplessness and pessimism are highly correlated to depression (e.g. Abramson et al., 1989; Peterson et al., 1992). Consistently, several research have showed that depression is related to self-criticism (e.g. Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982; Gilbert & Procter, 2006), low self-esteem (e.g. Gotlib, Lewinsohn, & Seeley, 1995; Orth, Robins, Widaman, & Conger, 2014), and women are more at risk for depression than men (Hammen & Watkins, 2013).

Lay and Silverman (1996) reported that negative affect was related to chronic everyday procrastination, thus procrastinators experience much more depressive feelings regarding academic related tasks. As a result, depression and procrastination are highly associated with each other such that when negative emotions are experienced at the peak level, procrastination increases (Steel, 2007). The research that were conducted with the university students revealed a significant relationship between procrastination and depression (e.g. Beswick et al., 1988; Farran, 2004; Saddler & Sacks, 1993; Senécal et al., 1995; Uzun Özer, O'Callaghan, Bokszczanin, Ederer, & Essau, 2014). In addition, it is found that depressed affect, neuroticism, and diminished feelings of control over the situation collectively represent one of the causes of the procrastination (McCown et al., 1989). Farran (2004) also found that higher academic procrastination is associated with higher procrastination. Thus, in the

light of shared characteristics among procrastination and depression, not surprisingly they are related. The surprising finding comes from another study, when self-regulation skills were statistically controlled, the relation between depression and procrastination disappeared (Pychyl & Flett, 2012). This implies that the relation between depression and procrastination may be both direct and indirect. In other words, self-regulation as a mediator may be a key factor related to both of depression and procrastination.

In a similar sense, in another study, Uzun Özer et al. (2014) investigated the effects of depression, perfectionism and self-regulation on procrastination with 402 undergraduate students and results revealed that depression and perfectionism were mediated by self-regulation to predict procrastination. The total variance in procrastination explained by endogenous and mediator variables is found as 33%. Therefore, the reviewed literature illustrated that depression might be both direct and indirect predictor of procrastination. However, there are still limited studies regarding the relationship between depression and procrastination.

2.5.3 Self-Esteem

Self-esteem is perhaps one of the most important constructs in psychology (Rhodewalt & Tragakis, 2003). It has been considered as a personal judgement of worthiness (Coopersmith, 1967). It has been defined as the entire thoughts and feelings of an individual regarding herself (Rosenberg, 1965). According to Rogers (1959). Self-esteem is one of the three components (the other two components are self-image and ideal self) of self-concept. Self-concept is a general term which is defined as one's belief about oneself, including personal attributes and who and what the self is (Baumeister, 1999). That is being aware of oneself means having a concept of oneself. Development of a concept of self

includes two aspects, namely: the existential self and the categorical self (Lewis, 1990).

The existential self is the most basic aspect of the self-concept which includes the sense of being separate and distinct from others and the awareness of the constancy of the self (Boyd & Bee, 2013). The child realizes that she or he exists as a separate entity and continues to exist over time and space. And the categorical self includes awareness of oneself as an object in the world which can be experienced and can have various characteristics. Thus, the self can be put into categories such as age, gender, skill, psychological traits, how others see the person, comparative evaluations etc. In this direction, self-esteem is seen as the extent to which one likes accept oneself or values oneself.

In contrast to self-as-object perspective, SDT offered to see the self as a process (Ryan & Brown, 2003). According to this perspective, the self is seen as a lifelong process of assimilation and integration instead of merely as a notion or as an object of self-evaluation (e.g. Blasi, 1988; Deci & Ryan, 1991; Loevinger, 1976). Normally, people do not have a tendency to ask “How worthy am I?” If they ask, there may be a preoccupation with their worth either positive or negative and this may indicate a problematic, contingent, and unstable self-esteem (Kernis, 2003). In this situation, motivation is driven by introjected regulation that one acts to gain or avoid losing self rather than to satisfy interest or personal values. Thus, optimal health occurs more likely when self-esteem is not a concern, hence the worth of self is not at issue (Ryan & Brown, 2003).

According to Kernis (2003) optimal and high self-esteem are different from each other. Optimal self-esteem includes qualities which are associated with genuine, true, stable, and congruent high self-esteem. On the other hand, high self-esteem can be secure or fragile depends on the extent it is defensive or

genuine, contingent or true, unstable or stable, and discrepant or congruent with implicit feelings of self-worth. In addition, authenticity -which includes four components namely awareness, processing, action, and relational- is taken as an adaptive feature of optimal self-esteem. It is offered that mindfulness may lead an open and nonjudgmental awareness of what is occurring in the present moment (Hodgins & Knee, 2002). Mindfulness and true self-determination emphasize that there is no fixed concept of self to protect or enhance (Rogers, 1957) and all the facts inform one's experiences and behaviors (Ryan & Brown, 2003). If one investigates a specific self-concept ("I am X"), it will be seen that inevitably there will be times one is not X. So, identification of one's self with a concept or image catalyzes defensive activities even if it is useful to preserve self-esteem (Ryan & Brown, 2003).

Therefore ongoing concern with the worth of the self may be a byproduct of need deficiencies or conflict (Ryan & Brown, 2003; Sheldon, Ryan, & Reis, 1996). In this situation, there is a lack in support for one or more the basic psychological needs – autonomy, competence, or relatedness. Thus, because of lacking of a sense of love, authenticity or effectiveness, people don't feel worthy. Consequently, there is a paradox of self-esteem: If you need it, you don't have it; if you have it, you don't need it (Ryan & Brown, 2003). It is a concern only when there is a need satisfaction problem.

Self-esteem may become a constructed image which leads people be overly attached to achievements, possessions, and relationships despite the real impermanence and interdependent origins of these things (Ryan & Brown, 2003). Both SDT and the Buddhist perspectives emphasize that psychological health is related to going beyond self-esteem (Deci & Ryan, 2000). SDT suggests that operating from one's true self –the authentic, spontaneous, and open integrative process- is associated with health, while Buddhism offers the recognition of no self –there is no permanent, real or fixed self to grasp- is

related to psychological health (Ryan & Brown, 2003). A person who is acting in an integrated and mindful way does not seek self-esteem, but rather right action with a consideration of all things. Thus, thinking and investigating self-esteem as a process instead of as a state-trait quality of the person are offered (Rhodewalt & Tragakis, 2003). At this base, when there is lack of satisfaction of one or more basic psychological needs satisfaction, it leads to self-esteem problems which in turn affect psychological health negatively. For instance, in the literature it is often emphasized that self-esteem concerns and depression often occur together (L'Abate & Bryson, 1994).

With regard to the relationship between procrastination and self-esteem, research yields mostly small negative correlations (e.g. Beswick et al., 1988; Burka & Yuen, 1983; Ferrari, 1991c; Ferrari, 1994; Ferrari & Tice, 2000; Flett et al., 1995; Judge & Bono, 2001; Solomon & Rothblum, 1984). That is, people who tend to highly procrastinate have a problem with their self-worth and have lower self-esteem.

Although the association between procrastination and self-esteem has been demonstrated in various studies, there are inconsistent findings regarding consideration of self-esteem as an antecedent or as a consequence of procrastination. While many studies offer self-esteem as the antecedent of performance (e.g. B. L. Beck et al., 2000; Klassen et al., 2008; Uzun Özer, 2010), a few others approach it as a consequence (e.g. Balkis et al., 2013). For example, people with low self-esteem may delay tasks. On the other hand, people who generally have a difficulty with completing tasks may experience self-esteem decline. With integrating this two perspective, Rhodewalt and Tragakis (2003) offer self-esteem as both an input and an outcome of goal-directed and self-involved activity; and they view self-esteem as a central aspect of self-control so that it triggers behavioral and cognitive strategies for self-concept maintenance. In the self-control process, people ask how they are

doing compared to the goal and the standard and give self-related affective reactions to their answers; and then based on the outcomes of these comparisons, people infer conclusions about themselves which further feeding their self-esteem.

Therefore, within this context, self-esteem is taken into consideration as a mediator between basic psychological needs satisfaction and self-control; and between basic psychological needs satisfaction and depression.

2.5.4 Self-Control

Many studies yielded that self-control is one of the strongest predictors of procrastination (e.g. E. M. Anderson, 2001; Uzun Özer, 2010; Wolters, 2003) so that procrastination is seen as a self-control failure (Ferrari, 2001). Self-control is defined as controlling the impulses to engage in behaviors that have known cost to the self, such as smoking, binge eating, procrastination etc. (Metcalf & Mischel, 1999). In the process of self-control, one continually ask how he is doing compared to some goal or standard (Rhodewalt & Tragakis, 2003). According to SDT perspective, humans have a tendency toward activity and integration through self-control, but also have a vulnerability to passivity (Ryan & Deci, 2000a). In the acquisition and regulation of nonintrinsically motivated behaviors, social context which support autonomy, competence and relatedness were found to foster greater self-control via greater internalization and integration than contexts that thwart satisfaction of the basic psychological needs and leads to passivity (Ryan & Deci, 2000b). According to Ryan and Brown (2003, p. 75), “In healthy self-control, the person is focused not only on what others approve of, but also on one’s own enduring values, pressing needs and true demands of the situation.”

In the literature, self-control and self-regulation terms are used interchangeably (E. M. Anderson, 2001). Self-control is a complex and multidimensional process (Baumeister & Heatherton, 1996). Carver and Scheier (1981) offer two basic forms of it, namely underregulation and misregulation. Underregulation is defined as a failure to exert self-control, while misregulation involves a misguided or counterproductive exertion of control over oneself. In addition, (Carver & Scheier, 1981) offered three main possible pathways to self-regulation failure: Standards, monitoring, operate.

Standards are ideals, goals, etc. which needs to be clear and consistent for a successful self-control (Carver & Scheier, 1981). For instance, too high and too low standards can block self-control. On the other hand, monitoring includes comparing the actual state of the self to the standards. The vital point is to keep close track of one's actions and states so that when people stop to monitor themselves, they tend to lose control. For example, procrastination can be considered to occur when one ceases to keep track of what they are doing. Lastly, operate phase of the feedback loop involves after getting the results of monitoring and if current state falls short of the standards, some actions are set to change the current state. If the person is not able to bring about the desired change, self-control failure may occur even if first two pathways are done successfully. Thus, it can be said that various instances of self-control involve a response which is initiated by a combination of underlying latent motivations and activating stimuli; and an overriding process (Carver & Scheier, 1981). Rather than preventing of an impulse to occur, self-control overrides the usual consequence of it. That means that if people have appropriate level of self-control, even if they delay to study impulsively, they can override the response sequence and prevent it from leading to procrastination. So the problematic part is not attempting to delay, but a lack of self-control to prevent the leading path to procrastination.

Similarly, in self-control model of Rosenbaum (1990) self-control is regarded as a set of well-learned behaviors and skills that a person self-controls his behavior. According to this model, there are four basic assumptions: “(a) human behavior is goal directed; (b) self-control behavior is called for when individuals encounter obstacles in the smooth execution of goal directed behavior; (c) self-control behavior is always associated with certain process regulating cognitions (PRC); and (d) there are multiple and interactive factors that influence the PRC and the self-control behavior” (Rosenbaum, 1990, p. 5). Thus, in various procrastination studies, self-control has generally been seen as a mediator (Fitzsimons & Bargh, 2004; Howell & Watson, 2007; Uzun Özer, 2010; Uzun Özer et al., 2014).

2.6 Summary of Review of Literature

Procrastination is a common problem in academic context. It may be tiring and frustrating for both the procrastinators and the people around them who are trying to help them to cope with it desperately, especially in the long term. Various theoretical approach have explained procrastination from very different point of views. Besides, procrastination and active delay were identified as distinct constructs. In active delay the aim is clear, however in procrastination the aim is still investigated, that is if procrastinating leads to various negative consequences then why people continue to procrastinate. A need based approach, SDT, may offer a new explanation to this question. That is, procrastination can be the best way which the person knows to do and can do at that time to compensate his/her unsatisfied basic psychological needs—as a self-protective process.

This contemporary approach emphasizes the role of basic psychological needs satisfaction as a core element to provide basis for energization and direction of action. Satisfying the needs with balance can increase vitality, motivation, self-control and psychological health. Supporting and understanding the basic needs

of the person by approaching him/her without negative labels (e.g. lazy, unsuccessful, useless) and with respect (nobody can say a person “do not protect yourself”) may be helpful in understanding this phenomenon.

The variables that can be related to both basic psychological needs and procrastination, including self-esteem, depression and self-control were reviewed based on the previous abundant literature. The research regarding the relationship between basic psychological need satisfaction and procrastination was limited. Therefore, this chapter summarized the definition of procrastination, the theoretical models of procrastination and SDT perspective as a fresh approach in understanding procrastination. Subsequently, the related literature on the proposed model variables basic psychological needs satisfaction, self-esteem, depression, self-control was explained. The core place of basic psychological needs satisfaction and its relationship with the other variables of the present study were provided to widen the reasons for including these variables in the present study.

CHAPTER 3

METHOD

In this chapter, firstly, the participants of the study are presented. Then, psychometric properties of data collection instruments of the study are given and data collection procedures, data analyses method, and limitations of the study are provided.

3.1 Design of the Study

The purpose of the present study was to investigate the role of basic psychological needs satisfaction (autonomy, competence, and relatedness) over procrastination through indirect effects of depression, self-esteem and self-control. In this direction, a correlational design was used. According to Barker, Pistrang, and Elliott (2015, p. 139) “Correlational studies aim to examine the relationship between two or more variables to see whether they covary, correlate, or are associated with each other”. In the current study, path analysis was utilized to evaluate how well the conceptual model generated from the Self Determination Theory fit the data. It is an extension of multiple regression and makes it possible to include relationships among variables that serve as predictors in one single model (i.e. mediation model) (Norman & Streiner, 2003).

3.2 Sampling Procedure and Participants

The participants of the present study were 732 undergraduate students from a private university in Ankara. The data were collected at the end of fall semester

of 2016-2017 academic year. Convenient sampling method was used. When data screening methods were employed, 721 cases remained.

The total number of the students enrolled in the university where the data were collected obtained from the Student Affairs Office of the university. The total number of students was 1256 and there were four faculties. A total of 291 students were from Faculty of Education, 293 students were from Faculty of Economics and Administrative Sciences, 172 of them were from Faculty of Architecture and 500 were from Faculty of Engineering.

The demographic information obtained from the participants showed that of the 721 students, 466 were female (64.6 %), 252 were male (35.1 %) and three participants did not mention about their gender. In terms of the distribution of participants by faculty, 276 (38.3 %) were from Faculty of Education, 215 (29.8 %) were from Faculty of Engineering, 136 (18.9 %) were from Faculty of Economics and Administration, and 94 (13 %) were from Faculty of Architecture. There were four different class levels. Specifically, the students consisted of 274 freshmen (38 %), 245 sophomores (34 %), 132 juniors (18.3 %), and 69 seniors (9.6 %). The age of the participants ranged from 17 to 27 with a mean of 20.57 ($SD = 1.47$). The mean of the cumulative general point average of the participants was 2.62 ($SD = .60$), ranging from .32 to 3.96.

The demographic information related to gender, class, and faculty of the participants was presented in Table 3.1. As shown in the table, more than half of the students were female. Also majority of the participants were freshmen and sophomores, while the least number of the students were seniors. Lastly, one third of the participants were from Faculty of Education, while the least number of students participated from Faculty of Architecture.

Table 3.1

Demographic Information of the Participants

Variables	<i>f</i>	%
Gender		
Female	466	64.6 %
Male	252	35.1 %
Class		
Freshmen	274	38 %
Sophomores	245	34 %
Juniors	132	18.3 %
Seniors	69	9.6 %
Faculty		
Faculty of Education	276	38.3 %
Faculty of Economics and Administrative Sciences	136	18.9 %
Faculty of Architecture	94	13 %
Faculty of Engineering	215	29.8 %

3.3 Data Collection Instruments

Six instruments were used in the present study. These were Demographic Information Form, Tuckman Procrastination Scale (TPS) (Tuckman, 1991), Basic Psychological Need Scale (BPNS) (Deci & Ryan, 2000), Depression Anxiety and Stress Scale (DASS) (Lovibond & Lovibond, 1995), Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965), Self-Control Schedule (SCS) (Rosenbaum, 1980).

3.3.1 Demographic Information Form

Demographic Information Form (see Appendix C) included five questions in order to gather information about the participants' gender, age, faculty, grade level and Cumulative General Point Average (CGPA).

3.3.2 Tuckman Procrastination Scale (TPS)

Tuckman Procrastination Scale (TPS) was developed by Tuckman (1991) to assess procrastination tendency related to academic tasks. The TPS includes 16 items embedded among 35 items regarding academic behaviors with a four-point Likert-type scale (*1 = strongly agree* to *4 = strongly disagree*). (Ferrari et al., 1995). An overall procrastination score is obtained by totaling items with scores range from 16 to 64. Higher scores mean greater degrees of procrastination. Sample items of the scale are as follows "I needlessly delay finishing jobs, even when they're important." or "I promise myself I'll do something and then drag my feet" (Tuckman, 1991). It includes four negatively stated items (items 7, 12, 14, and 16)., TPS has a unidimensional factor structure which accounts 30% of the common variance (Tuckman, 1991).

A few studies indicated adequate reliability and validity results for the TPS. Cronbach's alpha coefficient was .86 (n = 50) and .90 (n = 183) in the original study (Tuckman, 1991). For its concurrent validity, General Self-Efficacy Scale was correlated with TPS ($r = -.47$) and also behavioral measure of homework completion was correlated with TPS ($r = -.54$; Tuckman, 1991). In addition, TPS was found correlated with PASS -another procrastination measure- ($r = .68$) (Howell & Watson, 2007), and significant negative correlation with behavioral measure (Klassen et al., 2008).

The Turkish adaptation of the scale was done by Uzun Özer, Saçkes, and Tuckman (2013). Two items (items 4 and 10) were removed from the measure since they loaded on a different factor. One-factor, 14-item scale was supported by confirmatory factor analysis. In addition, negative correlations were found between the Turkish Version of TPS and the Academic Self-efficacy Scale (Yılmaz, Gürçay, & Ekici, 2007) ($r = -.22$); and the Rosenberg Self-Esteem Scale (Çuhadaroglu, 1986) ($r = -.23$). In the Turkish version of TPS study, a five-point scale ranging from *1 = strongly agree*, *2 = agree*, *3 = unsure*, *4 = disagree*, *5 = strongly disagree* was used with total scores range from 14 to 70. Four items (7, 10, 12, and 14) are reverse scored. For the Turkish version of the scale Cronbach alpha coefficient was found as .90.

3.3.2.1 Psychometric properties of the TPS for the present study

Confirmatory Factor Analysis (CFA) with maximum likelihood estimation was used to test the construct validity of the TPS in the present study (Arbuckle, 2014). The results were presented in Table 3.2, the model fitted data after one modification suggested by the program; $\chi^2 (76) = 337.67$, $p = .00$; $\chi^2/df = 4.44$; SRMR = .04, RMSEA = .07, CFI = .93.

Optimal values (criteria) for goodness of fit indices are: the normed chi-square (χ^2 /df) value which is lower than 3 (Kline, 2015) or 5 indicates adequate fit (Schumacker & Lomax, 2004); standardized root mean square residual (SRMR) should be less than .08 for adequate fit (Hu & Bentler, 1999); comparative fit index (CFI) values above .90 is suggested criterion for acceptable fit (Geoffrey Maruyama, 1998); the value of root mean square error of approximation (RMSEA) is recommended to be less than .06 (Hu & Bentler, 1999) or .08 (Jaccard & Wan, 1996) for a good fit. Therefore, the construct validity of the scale was confirmed in the present study.

The standardized coefficients of the model were showed in Figure 3.1.

Table 3.2

Fit Indices of TPS for the Present Study

	$\chi^2(df)$	χ^2 / df	SRMR	CFI	RMSEA
Optimal Value	-	< 3.0 ^a /5.0 ^b	< .08 ^c	> .90 ^d	< .06 ^e /.08 ^f
Measurement Model of TPS	337.67(76)	4.44	.04	.93	.07

Note a. (Kline, 2015); b. (Schumacker & Lomax, 2004) c. (Hu & Bentler, 1999); d. (Geoffrey Maruyama, 1998); e.(Hu & Bentler, 1999); f. (Jaccard & Wan, 1996) *p<.001

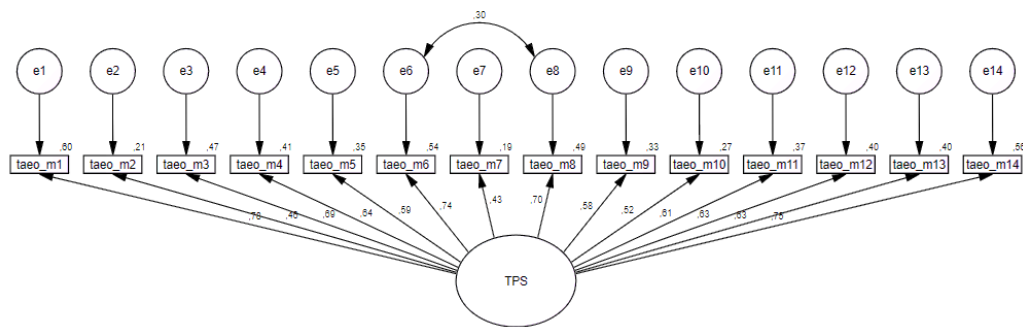


Figure 3.1 Single factor CFA model of TPS with standardized estimates

As seen in Figure 3.1, the standardized values were ranged from .43 to .78. Besides, as presented in Table 3.3, the unstandardized factor loadings of the items of TPS were between .47 and 1.10; standardized factor loadings were found between .43 and .78; all t values were statistically significant and they changed between 11.37 and 20.46. Also, the variance explained by each item

ranged from 19% to 61%. Therefore, these results confirmed one single dimension factor structure of the scale for the present study. In addition, Cronbach alpha coefficient was found as .90.

Table 3.3

Unstandardized and Standardized Parameter Estimates, t Values and R²

	Item	Unstandardized Factor Loadings	Standardized Factor Loadings	<i>t</i>	<i>R</i> ²
TPS	1	1.10	.78	20.86	.56
	2	.58	.46	12.20	.40
	3	.87	.69	18.97	.40
	4	.78	.64	17.49	.37
	5	.76	.59	15.92	.27
	6	1.03	.74	20.49	.33
	7	.47	.43	11.37	.49
	8	.86	.70	19.25	.19
	9	.69	.58	15.50	.54
	10	.52	.52	13.74	.35
	11	.80	.61	16.49	.41
	12	.75	.63	17.27	.47
	13	.72	.63	17.21	.21
	14	.91	.75	20.86	.61

Note. All *t* values were significant. $p < .001$.

3.3.3 Basic Psychological Need Scale (BPNS)

The Basic Psychological Need Scale (BPNS) (Deci & Ryan, 1991, 2000; Gagné, 2003) assesses the degree of satisfaction of three basic psychological needs which are amongs to Self Determination Theory namely: Autonomy (R stands for "reversely coded"; items 1, 4(R), 8, 11(R), 14, 17, and 20(R)), competence (Items 3(R), 5, 10, 13, 15(R), and 19(R)) and Relatedness (Items 2, 6, 7(R), 9, 12, 16(R), 18(R), and 21). It consisted of 21 items with a five-point Likert scale (*1 = not at all true, 5 = very true*), the total scores change between 21 and 105. A measure of need satisfaction at work was the base for BPNS, it was adapted from that measure (Ilardi, Leone, Kasser, & Ryan, 1993). Examples of items are, "Most days I feel a sense of accomplishment from what I do" (competence); "I feel like I am free to decide for myself how to live my life" (autonomy); and "I really like the people I interact with" (relatedness). An index of general need satisfaction was obtained by taking the average of the three factors ($\alpha = .89$) and their correlations were between .61 and .66 (Gagné, 2003). Cronbach's alpha coefficients were found .69 for autonomy, .71 for competence and .86 for relatedness (Gagné, 2003).

Johnston and Finney (2010) examined its dimensionality which has been assumed but not empirically studied. The existence of a one- and a three-factor structures for the scale were investigated; however, neither of the models fit the data (Johnston & Finney, 2010). Then, they examined the patterns of misfit by testing various models with different samples. Among these models, reduced 16-item second-order three-factor model had the best psychometric results (Johnston & Finney, 2010).

The initial Turkish adaptation of BPNS was done by Cihangir-Çankaya and Bacanlı (2003). Second-order comprised of both two factor and three factor solution of the scale were tested by CFA. Second-order three factor model had

better results, RMSEA= .07, GFI= .86, AGFI= .82, CFI= .82, NFI= .80. However, goodness of fit indices GFI, AGFI, CFI, and NFI was below the optimal fit value .90 (Bentler & Bonett, 1980). Secondly, another Turkish translation of the scale was done by Şimşek and Yalınçetin (2010) and BPNS was used for that study. The internal consistency of the scale was found as .82, indicating a good reliability. However the study did not include EFA or CFA.

3.3.3.1 Psychometric properties of the BPNS for the present study

According to the CFA studies of Johnston and Finney (2010), three-independent factors model (7-item one factor autonomy, 6-item one factor competence, and 8-item one factor relatedness) had good fit indices: Satorra-Bentler $\chi^2(96) = 190.74, p < .001$, SRMR = .05, RMSEA = .04, CFI = .97. In addition, the distinctiveness of the three needs was confirmed for external validity evidence.

In this direction, in the present study, the construct validity of the three-independent factors model of BPNS was tested through CFA with maximum likelihood estimation by using AMOS 23 software program (Arbuckle, 2014). The several fit indices were utilized as presented in Table 3.4. The standardized coefficients of the model were illustrated in Figure 3.2, 3.3 and 3.4.

Table 3.4

Fit Indices of BPNS for the Present Study

	$\chi^2(df)$	χ^2 / df	SRMR	CFI	RMSEA
Optimal Value	-	< 3.0 ^a /5.0 ^b	< .08 ^c	> .90 ^d	< .06 ^e /.08 ^f
Measurement Model of Autonomy	24.04(10)*	2.40	.03	.98	.04
Measurement Model of Competence	4.49(6)*	.75	.02	1.00	.00
Measurement Model of Relatedness	91.50(19)*	4.82	.05	.94	.07

Note. a. (Kline, 2015); b. (Schumacker & Lomax, 2004) c. (Hu & Bentler, 1999); d. (Geoffrey Maruyama, 1998); e.(Hu & Bentler, 1999); f. (Jaccard & Wan, 1996) * p<.001

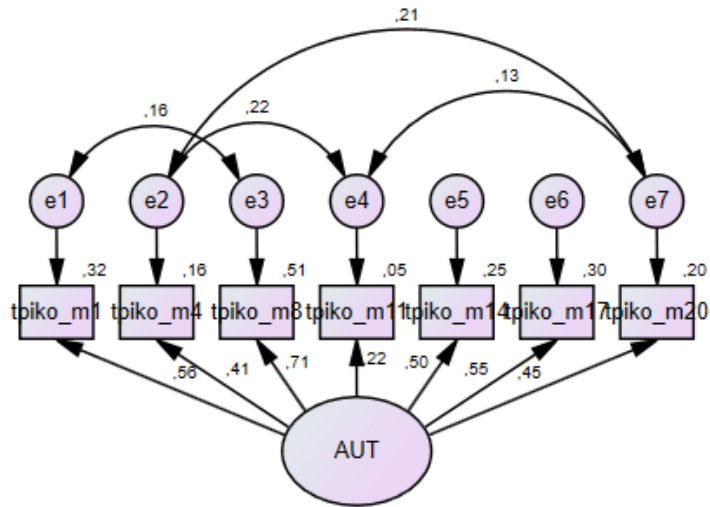


Figure 3.2 Single factor CFA model of BPNS-AUT with standardized estimates

As seen in Figure 3.2, the standardized values were ranged from .41 to .71. One factor structure of the scale was supported for the present study. In addition, Cronbach alpha coefficient was found as .71.

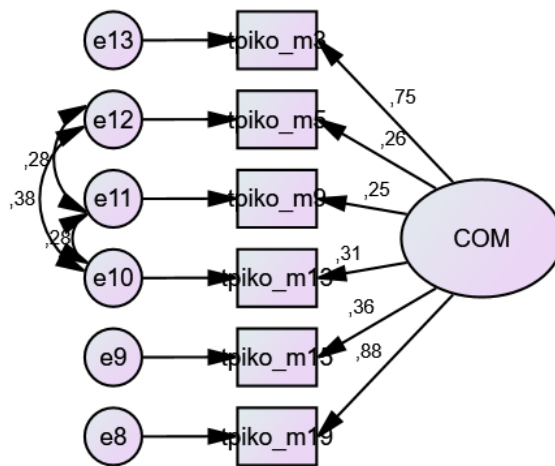


Figure 3.3 Single factor CFA model of BPNS-COM with standardized estimates

As seen in Figure 3.3, the standardized values were ranged from .25 to .88. The results proved the factor structure of the scale with one single dimension for the present study. In addition, Cronbach alpha coefficient was found as .69 for internal reliability.

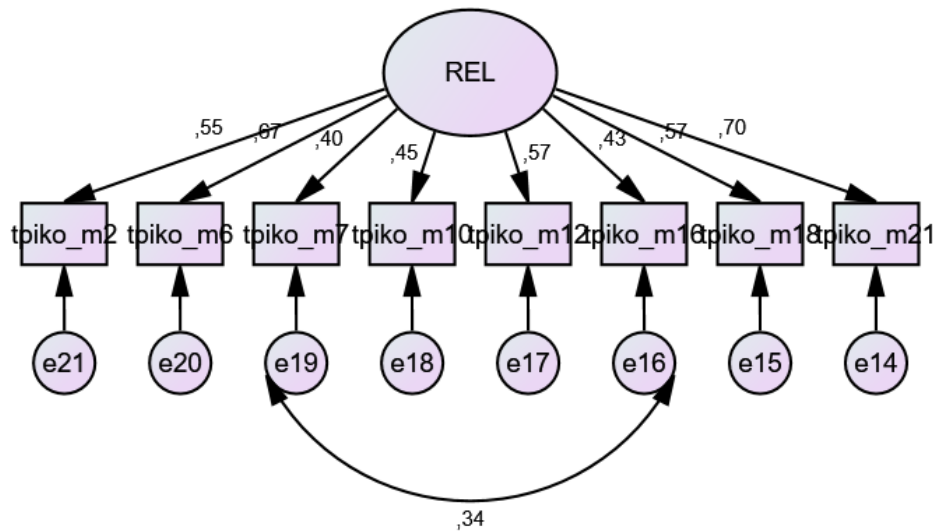


Figure 3.4 Single factor CFA model of BPNS-REL with standardized estimates

As seen in Figure 3.4, the standardized values were ranged from .40 to .78. The results confirmed one single the factor structure of the scale for the present study. In addition, Cronbach alpha was .77.

3.3.4 Depression Anxiety and Stress Scale (DASS)

Depression Anxiety and Stress Scale (DASS) is a 42-item scale which was developed by Lovibond and Lovibond (1995) to measure present symptoms of depression, anxiety and stress. In the current study, only the depression dimesion was used. Because depression is the highest correlated one with

procrastination. Depression subscale assesses dysphonic mood, hopelessness, devaluation of life, self-deprecation, and lack of interest/involvement, anhedonia and inertia. The total scores have a range between 14 and 56 with a four-point Likert scale (*1 = did not apply to me, 4 = applied to me very much*). The sample items include “I felt down-hearted and blue” and “I find it hard to wind down”. The items related to depression subscale were items 3, 5, 10, 13, 16, 17, 21, 24, 26, 31, 34, 37, 38 and 42. The other subscales are anxiety and stress. Cronbach's alphas of the subscales were found as .94, .88, and .93 for depression, anxiety, and stress respectively (Nieuwenhuijsen, de Boer, Verbeek, Blonk, & van Dijk, 2003). In the same study, a three factor structure of the DASS-42 were confirmed.

The scale was shown to have adequate psychometric properties (Lovibond & Lovibond, 1995). The DASS-42 Depression scale was found correlated 0.74 with the Beck Depression Scale (BDI) and the DASS-42 scales showed greater separation in factor loadings when compared with the BDI. The difference was primarily related to the items in the BDI which assess weight loss, insomnia, somatic preoccupation and irritability. They fail to differentiate other affective states and depression. The Cronbach alpha for the DASS-42 Depression scale was found as .91, indicating high reliability.

Validity and reliability analyses of the Turkish version of DASS-42 were investigated with the data obtained from 1102 university students by Bilgel and Bayram (2010). Item-scale correlations which are from .48 to .70 for depression were examined for construct validity. On the other hand, for convergent validity, the Turkish DASS-42 depression scale was found highly associated with Hospital Anxiety and Depression Scale ($r = .64$). The Cronbach alpha of the scale was .92, revealing high internal consistency (Bilgel & Bayram, 2010).

3.3.4.1 Psychometric properties of the DASS-42 depression subscale for the present study

The construct validity of the TPS was tested in the present study (Arbuckle, 2014). The results can be seen in Table 3.5.

Table 3.5

Fit Indices of DASS-42 Depression Subscale for the Present Study

	$\chi^2(df)$	χ^2 / df	SRMR	CFI	RMSEA
Optimal Value	-	< 3.0 ^a /5.0 ^b	< .08 ^c	> .90 ^d	< .06 ^e /.08 ^f
Measurement Model of DASS-42 Depression Subscale	334.46(69)*	4.85	.04	.97	.07

Note. a. (Kline, 2015); b. (Schumacker & Lomax, 2004) c. (Hu & Bentler, 1999); d. (Geoffrey Maruyama, 1998); e.(Hu & Bentler, 1999); f. (Jaccard & Wan, 1996) * p<.001

Slight modifications suggested by program were done and the model fit the data. Table 3.5 indicates that χ^2 value was 334.46 and df was 69. The normed chi-square value was found as 4.85. It was an acceptable ratio. In addition to chi-squared statistics, the other goodness of fit indices showed that the model fitted the data very well, SRMR=.04, CFI=.97, RMSEA=.07.

Therefore, the construct validity of DASS depression subscale was ensured for the current study. The standardized coefficients of the model were illustrated in Figure 3.5.

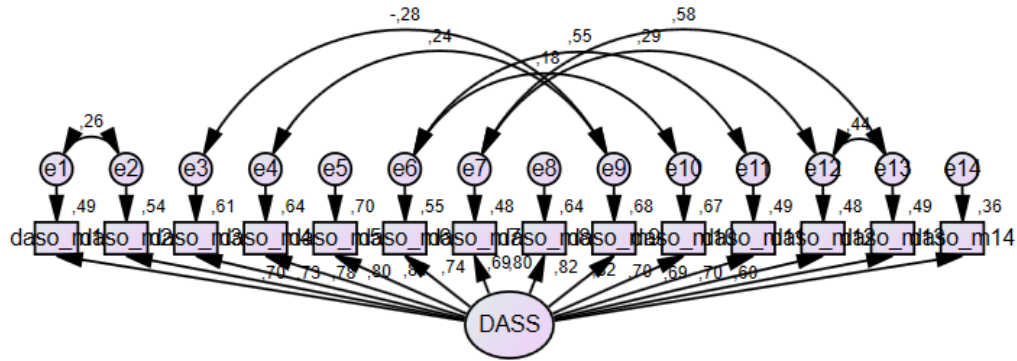


Figure 3.5 Single factor CFA model of DASS-42 depression subscale with standardized estimates

As seen in Figure 3.5, the standardized values were ranged from .60 to .82. The results proved the factor structure of the scale with one single dimension for the present study. In addition, Cronbach alpha coefficient was .95.

3.3.5 Rosenberg Self-Esteem Scale (RSES)

Rosenberg Self-Esteem Scale (RSES) was developed by Rosenberg (1965) to assess global self-esteem or self-worth (all of the positive and negative feelings about the self). It is a widely used instrument. RSES has been used extensively with samples of all ages, from adolescents to older adults (Mullen, Gothe, & McAuley, 2013).

RSES consisted of 10 items with a four-point Likert-type scale (*1 = strongly disagree, 4 = strongly agree*). Items 1, 2, 4, 6 and 7 are reversely coded. The scale has five positively (e.g., “On the whole, I am satisfied with myself”), and

five negatively worded items (e.g., “I certainly feel useless at times”). A total score was obtained ranging from 10 to 40 by summing the items.

Rosenberg (1965) found Cronbach alpha coefficient as .80. Many independent studies conducting with parents, men over 60, high school students, and civil servants revealed alpha coefficients ranging from 0.72 to 0.87. For two-week interval, test-retest reliability was found as 0.85, the seven-month interval was found as 0.63 (Shorkey & Whiteman, 1978; Silber & Tippett, 1965). The RSES is closely correlated with the Coopersmith Self-Esteem Inventory ($r = .60$) (Coopersmith, 1967) and Health Self-Image Questionnaire ($r = .83$).

Although single-factor structure has been reported mostly, a few studies reported two-factor structure. For example Shahani, Dipboye, and Phillips (1990) identified two independent dimensions, while Rosenberg (1965) and Crandall (1973) supported the unidimensionality of the scale. However, the identified separate dimensions were mostly defined by negatively worded vs. positively worded items.

Çuhadaroglu (1986) adapted the scale into Turkish. The rating scale ranges from “totally right” to “totally wrong” in the Turkish version. The correlation between the scale and psychiatric interviews was .71 over a 4-week period. Test-retest reliability of the scale was .75. In another study which was conducted with Turkish university students, internal consistency of the scale was .87 (Çelik, 2004).

3.3.5.1 Psychometric properties of the RSES for the present study

In the present study, the construct validity of the RSES was tested with CFA (Arbuckle, 2014). The fit indices can be seen in Table 3.6.

Table 3.6

Fit Indices of RSES for the Present Study

	$\chi^2(df)$	χ^2 / df	SRMR	CFI	RMSEA
Optimal Value	-	< 3.0 ^a /5.0 ^b	< .08 ^c	> .90 ^d	< .06 ^e /.08 ^f
Measurement Model of RSES	138.47(31)*	4.47	.04	.97	.07

Note. a. (Kline, 2015); b. (Schumacker & Lomax, 2004) c. (Hu & Bentler, 1999); d. (Geoffrey Maruyama, 1998); e.(Hu & Bentler, 1999); f. (Jaccard & Wan, 1996) * p<.001

The model fit the data, with slight modifications. As seen in the Table 3.6, χ^2 value was 138.47 and *df* was 31. The normed chi-square value was 4.47, which was an acceptable ratio. In addition to chi-squared statistics, the other goodness of fit indices showed that the model fitted the data very well, SRMR=.04, CFI=.97, RMSEA=.07.

These results showed that the construct validity of RSES was ensured for the present study. The standardized coefficients of the model were illustrated in Figure 3.6.

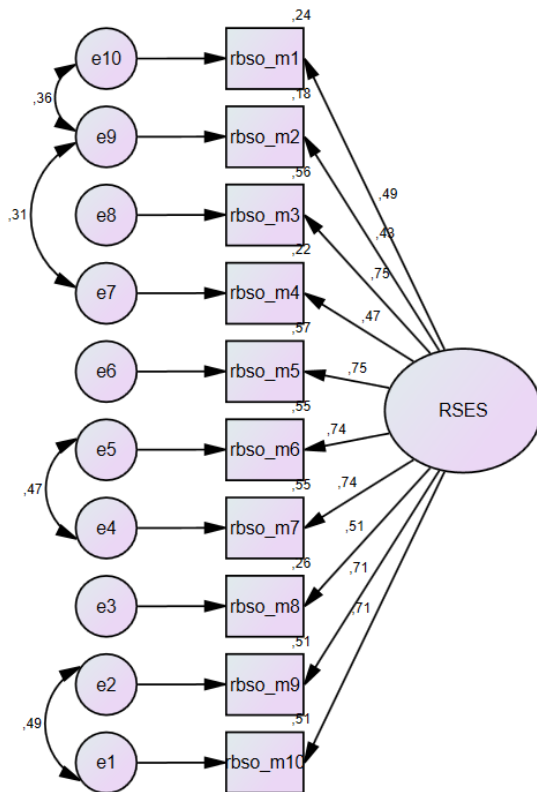


Figure 3.6 Single factor CFA model of RSES with standardized estimates

As seen in Figure 3.6, the standardized values were ranged from .43 to .75. The results proved the factor structure of the scale with one single dimension for the present study. In addition, for internal consistency, Cronbach alpha was .88.

3.3.6 Self-Control Schedule (SCS)

Self-Control Schedule (SCS), which consisted of 36 items to measure students' methods of self-control in coping with behavioral problems, was developed by Rosenbaum (1980). It. Rosenbaum (1980, p. 1) mentioned that "It describes (a) use of cognitions and self-statements to control emotional and physiological responses, (b) the application of problem solving strategies, (c) the ability to

delay immediate gratification, and (d) inability belief to self-regulate internal events.”

I includes a 6-point Likert scale (-3 = *very uncharacteristic of me*, +3 = *very characteristic of me*) without neutral response alternative. Higher scores indicate greater resourcefulness. Eleven items (The items 4, 6, 8, 9, 14, 16, 18, 19, 21, 29 and 35) are reversely coded.

A number of studies indicate adequate reliability and validity results for the SCS (Rosenbaum, 1980). With 4 weeks interval, test-retest reliability showed that over time the SCS was stable ($r = .96$). With six different samples, Cronbach’s alphas ranged from .78 to .86. SCS was found correlated with Croskey’s Measure of Communication Apprehension ($r = -.37$; Rosenbaum, 1980), and also it was found negatively associated with Rotter’s Locus of Control Scale ($r = -.37$), 3) and Manifest Anxiety Scale ($r = -.56$; Richards, 1985). In the validity studies of McWhirter, Burrow-Sanchez, and Townsend (2008), a three factor structure with reduced 22-items was revealed (McWhirter et al., 2008).

Siva (1991) adapted the scale into Turkish. The Turkish version includes a 5-point Likert scale ranging from 1 = *very uncharacteristic of me* to 5 = *very characteristic of me*. A total score range from 36 to 180 can be obtained by adding the responded items. High scores are indicative of high self-control.

Principal component analysis was conducted for the factor structure of the scale. Factor analysis yielded 12 factors, namely 1) planful behavior, 2) mood control, 3) control of unwanted thoughts, 4) impulse control, 5) competency and easing oneself, 6) pain control, 7) procrastination, 8) help seeking, 9) take positive, 10) directing attention, 11) flexible planning, 12) supervised seeking. 58.2% of the total variance was explained by these factors (Dağ, 1991). In

addition, SCS was found corelated with Rotter’s Locus of Control Scale ($r = -.29$) (Dağ, 1991). Test-retest correlation was found as .80 and Cronbach alphas for two samples were found as .85 and .78 (Dağ, 1991).

3.3.6.1 Psychometric properties of the SCS for the present study

The SCS’s construct validity was tested by using CFA in the current study (Arbuckle, 2014). Reduced 22-item with a three-factor structure was used in the current study. The fit indices took place in Table 3.7.

Table 3.7

Fit Indices of SCS for the Present Study

	$\chi^2(df)$	χ^2 / df	SRMR	CFI	RMSEA
Optimal Value	-	<	< .08 ^c	> .90 ^d	< .06 ^e /.08 ^f
Measurement Model of SCS (22 items)	521.88 (201)*	2.60	.07	.90	.05

Note. a. (Kline, 2015); b. (Schumacker & Lomax, 2004) c. (Hu & Bentler, 1999); d. (Geoffrey Maruyama, 1998); e.(Hu & Bentler, 1999); f. (Jaccard & Wan, 1996) * $p < .001$

Slight modifications were done and the model fit the data. The results were given in Table 3.7, χ^2 value was 521.88 and df was 201. The normed chi-square value was 2.60, which was an acceptable ratio. In addition to chi-squared statistics, the other goodness of fit indices showed that the model fitted the data very well, SRMR=.07, CFI=.90, RMSEA=.05.

According to these results, the construct validity of SCS was satisfied. The standardized coefficients of the model were illustrated in Figure 3.7.

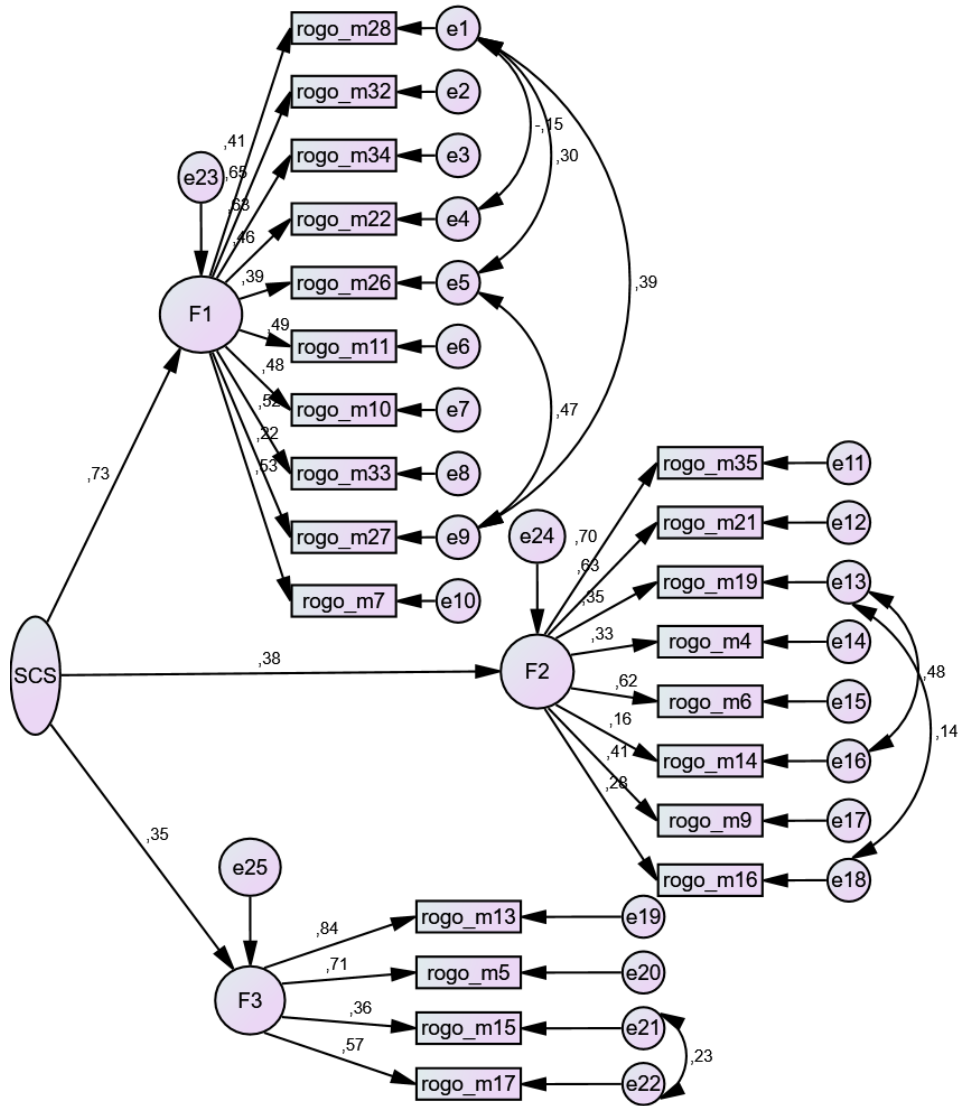


Figure 3.7 Second-order comprised of three factors model of SCS with standardized estimates

As seen in Figure 3.7, the standardized values were ranged from .22 to .68, .16 to .70, and .36 to .84 for the factors. The three factor structure of the scale with 22 items was supported for the present study. In the present study, composite score was used. For internal reliability, Cronbach alpha coefficients were .77, .67 and .73 for the three-factors; and .75 for the total scale.

3.4 Data Collection Procedure

The data were collected by the researcher towards the end of the fall semester of 2016-2017 academic year in a four week period. The Human Subjects Ethics Committee (HSEC) of the Middle East Technical University consent was obtained to utilize measures. All instruments were employed during classroom hours mostly by the researcher and for a few classroom, the researcher get help. Oral and written instructions were given to other research assistants in detail for the scale application. Both the permission of the instructors of each class and consent of the participants were obtained before the administration of the measures. Any identifying information about participants was not requested to ensure confidentiality and anonymity. The completion of the all measures took approximately 20 minutes.

3.5 Description of Variables

In this part, exogenous variable (basic psychological need satisfaction), mediator variables (depression, self-esteem and self-control), and endogenous variable (procrastination) were described and operationalized.

3.5.1 Exogenous variable

Both person and environment related variable basic psychological needs satisfaction (autonomy need satisfaction, competence need satisfaction and relatedness need satisfaction) was included to study as exogenous variable.

Basic psychological needs satisfaction was assessed by Basic Psychological Need Scale (BPNS) as 21 items, 5 point Likert-type scale with 3 subscale (autonomy need satisfaction, competence need satisfaction and relatedness need satisfaction). The scores ranged from 9 to 35 for autonomy need satisfaction, from 8 to 30 for competence need satisfaction and from 16 to 40 for relatedness need satisfaction.

3.5.2 Mediator variables

Depression, self-esteem and self-control as person related variables were utilized as mediator variables.

Depression was assessed by DASS-42 Depression subscale with 14 items, 4 point Likert-type scale. Total scores ranged from 14 to 56 points.

Self-esteem was assessed by Rosenberg Self-Esteem Scale (RSES) with 10 items, 4 point Likert-type scale. Total scores ranged from 10 to 40 points.

Self-control was measured by Self-Control Schedule (SCS) as 36 items, 5 point Likert-type scale. Total scores ranged from 60 to 164 points.

3.5.3 Endogenous variable

Procrastination was identified as the endogenous variable of the study.

Procrastination was measured by Tuckman Procrastination Scale (TPS). It has 14 items, rated on 5 point scale. Total scores ranged from 15 to 70 points.

3.6 Data Analysis

The purpose of this study was to develop a model of procrastination based on self-determination theory. For this purpose, AMOS 23 software program (Arbuckle, 2014) were used to examine theoretical relationships among dependent, independent and mediator variables through path analysis.

Path analysis is a method applied to determine whether or not a multivariate set of nonexperimental data fits well with a priori causal model (Wright, 1934). Path analysis was chosen instead of regression models because it is a useful tool for planning out research and spelling out the theoretical model (Barker et al., 2015). In addition, although over the past few years, path analysis has been replaced in many cases by structural equation modeling (SEM), it is still used by the researchers (e.g. K. Day et al., 2018; Ge et al., 2017; Khalil et al., 2017; Wang et al., 2017) since, the limitations imposed by assumptions about measurement and specification error in path analysis may be balanced by other features like its capacity to talk about indirect effects and to take correlations or covariances and break them into causal and noncausal components (called decomposition of effects) (Geoffrey Maruyama, 1998). Besides, the scales in the present study are consisted of a total score with one dimension and several items; and this makes hard to get a simple model and to interpret the results theoretically plausible with structural equation modeling (Kline, 2015), thus path analysis was preferred over structural equation modeling.

3.7 Limitations of the Study

The findings should be interpreted by taking into account following limitations of the current study. Firstly, the data collected from undergraduate students of a private university in Ankara represents the scope of the study. Although the university includes a heterogeneous population where students came from various cities of Turkey, generalization of the findings to other samples is not possible.

Secondly, application of the instruments was done in different classroom settings (i.e. large classes, different lessons). Although the researcher paid attention to follow a standardized scale administration procedure, there were slight differences in application of the instruments depending on situational factors such as quizzes that were done before data collection, the time of the class (i.e. morning class, last class of the day), the number of the students who were coming late etc.

And finally, individuals who procrastinate are not a homogenous group. In the present study, there were participants who have high procrastination tendency with very high cumulative GPAs (i.e. 3.80) and also very low cumulative GPAs (i.e. 0.10). That is subjective judgments regarding delaying may include very different perceptions. Therefore, rather than the actual procrastination levels, perceived procrastination levels were assessed in the current study.

CHAPTER 4

RESULTS

This chapter includes details of data analysis. It begins with preliminary analyses and then the results regarding descriptive statistics were presented. Lastly, correlations among variables and the results of path analysis for model testing took place.

4.1 Preliminary Analyses

Before conducting the analyses, all of the variables were controlled for missing data. Firstly, the data were examined by using frequencies to look minimum and maximum scores. The cases which have more than 5 % missing values were deleted (Tabachnick & Fidell, 2013). After this deletion, among 732 participants, 721 subjects were left for analyses. In addition, the cases which have less than 5 % missing values were replaced with the mean of the given variable. No presence of any outliers was found.

The statistical assumptions in path analysis are of two types: related to multiple regression and unique to path analysis (Munro, 2005). In this line, the assumptions including univariate and multivariate normality, linearity, homoscedasticity and no perfect multicollinearity were checked by using IBM SPSS 23 and AMOS 23 Program (Arbuckle, 2014).

Firstly, univariate normality was checked by using skewness and kurtosis values, histograms and Q-Q plots. Firstly, skewness and kurtosis values of each item are given in Table 4.1.

Table 4.1

Indices of Normality for Study Variables

Variable	Skewness	Kurtosis
Procrastination	.03	-.44
Self-Control	.03	.08
Depression	.66	-.47
Self-Esteem	-.46	-.17
Autonomy Need Satisfaction	-.36	.16
Competence Need Satisfaction	-.28	-.27
Relatedness Need Satisfaction	-.36	-.50

All the values that are given in the Table 4.1 are between -3 and +3 and close to zero which is proper the criteria mentioned by Tabachnick and Fidell (2013). This implies less variation in the data, less extreme cases and scores, and more normal distribution. Most of the histograms are close to normal distribution and the dots are close to the line in Q-Q plots, this implies that the distribution is normal. Self-esteem variable seems to be negatively skewed and depression variable seems to be positively skewed. Therefore when we take into account all of the normality tests results the three tests showed that the univariate normality assumption is satisfied.

For checking multivariate normality assumption, AMOS program was used and the multivariate kurtosis value of (Mardia's coefficient) was found as 9.04 which is smaller than the critical ratio value 10.81. This implies that multivariate normality assumption is satisfied.

In addition, tolerance, and Variance Inflation Factor (VIF) values and bivariate correlation coefficients were explored to test the assumption of multicollinearity. According to Berry (1993), when r is .90 the standard errors

of the regression coefficients are doubled and if there is a multicollinearity, none of the regression coefficients may be significant because of the large size of standard errors. As seen in Table 4.2, none of the correlations between variables is greater than .90. Moreover all of the VIF values are ranged from 1.33 to 2.35 and these values are less than four (Field, 2009), and all of the tolerance values are ranged between .43 and .75 and these values are more than .20 (Menard, 2002) as they are supposed to do. Therefore there appears no violation of multicollinearity.

The assumption of linearity was checked by using scatterplots of all variables. As can be seen in Figure 4.1 almost all of the scatterplots were oval shaped which implies linearity. Also, scatter plot of predicted values and residuals did not show any pattern, as can be seen in Table 4.2. Thus homoscedasticity assumption was also satisfied.

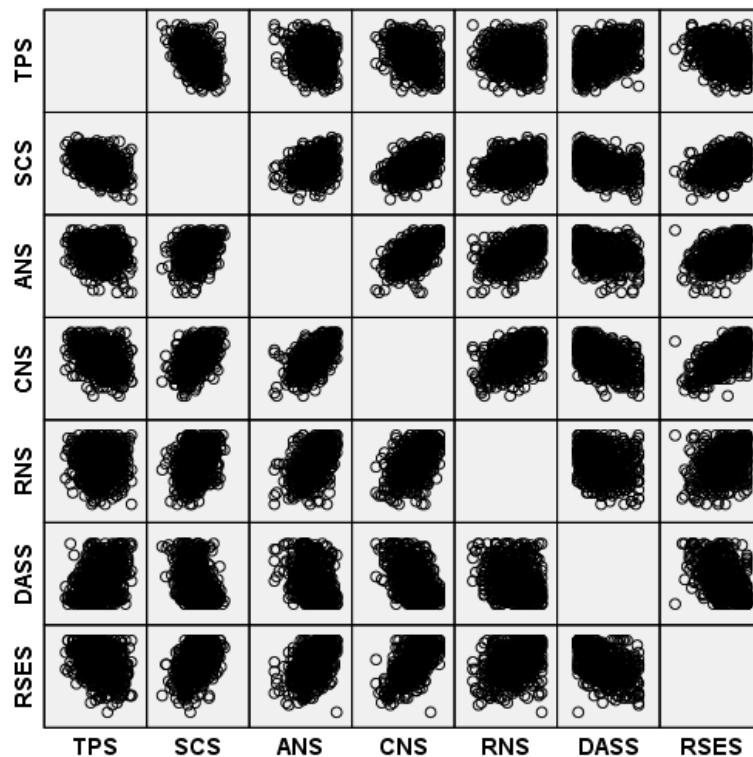


Figure 4.1 Scatterplot matrix of all variables in the study

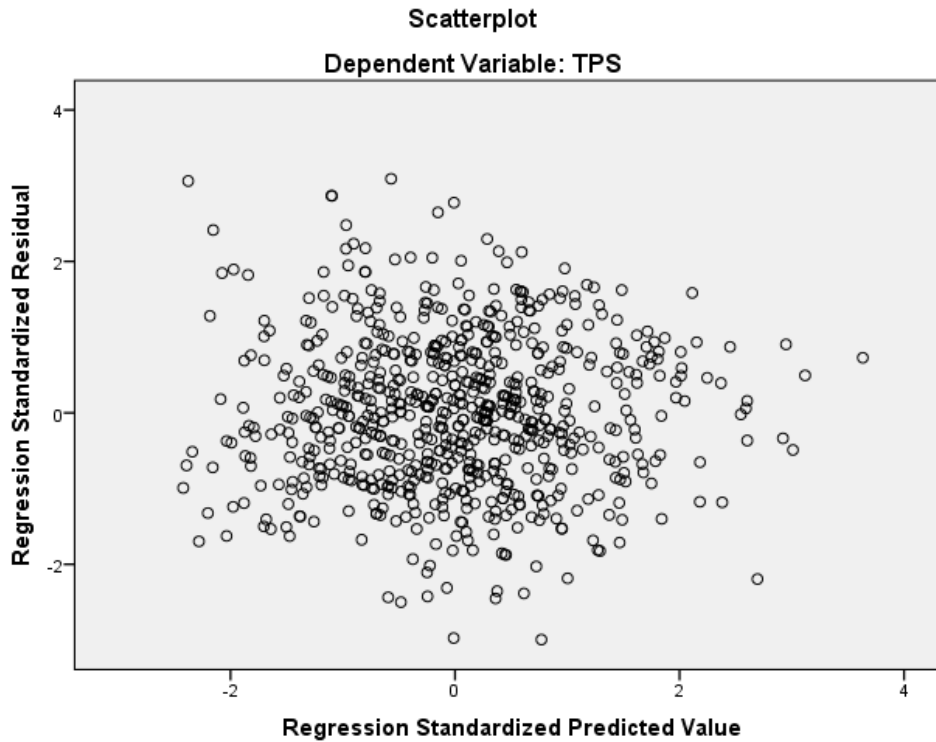


Figure 4.2 Scatter plot of predicted values and residuals

4.2 Descriptive Statistics and Correlations

For each variable means, standard deviations and intercorrelations were presented in the Table 4.2.

As seen in Table 4.2, the mean scores of the procrastination levels of the participants was found as 43.5 ($SD = 10.94$). Scores range from 14 to 70 with higher scores reflecting greater degrees of procrastination.

Regarding other study variables, the mean scores of self-control was 116.33 ($SD = 16.55$), the mean scores of depression was 29.27 ($SD = 11.08$), the mean scores of self-esteem was 30.68 ($SD = 5.79$), the means of autonomy need satisfaction was 25.41 ($SD = 4.69$), the mean scores of competence need

satisfaction was 21.43 ($SD = 4.26$), and finally the mean scores of relatedness need satisfaction was found as 30.74 ($SD = 5.22$).

Table 4.2

Means, Standard Deviations and Intercorrelations for the Study Variables

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7
1. TPS	43.5	10.94	-						
2. SCS	71.70	11.34	-.40**	-					
3. DASS	29.27	11.08	.34**	-.37**	-				
4. RSES	30.68	5.79	-.31**	.41**	-.51**	-			
5. ANS	25.41	4.69	-.20**	.34**	-.36**	.48**	-		
6. CNS	21.43	4.26	-.33**	.44**	-.47**	.65**	.60**	-	
7. RNS	30.74	5.22	-.08*	.30**	-.28**	.36**	.51**	.49**	-

Note. $N = 721$. TPS = Tuckman Procrastination Scale, SCS = Self-Control Schedule, DASS = Depression Anxiety and Stress Scale, RSES = Rosenberg Self-Esteem Scale, ANS = Autonomy Need Satisfaction, CNS = Competence Need Satisfaction, RNS = Relatedness Need Satisfaction. ** $p < .01$, * $p < .05$, two-tailed

In addition to descriptive analysis, bivariate correlations were computed to examine the interrelationships and also to check no perfect multicollinearity among all of the study variables. Field (2009) states that multicollinearity exists when there is a strong correlation between two or more predictors in a regression model. According to Berry (1993), when r is .90 the standard errors of the regression coefficients are doubled and if there is a multicollinearity, none of the regression coefficients may be significant because of the large size of standard errors. None of the correlation between predictors is greater than .90. There were no highly correlated variables more than .65, suggesting that the multicollinearity among the study variables was not severe.

Several patterns emerged as seen in Table 4.2. Mostly significant and theoretically expected relationships between procrastination and other study variables were found. All of the correlations were found statistically significant with a range between $-.51$ and $.65$.

Consistent with the theoretical expectations, depression was positively related to procrastination, while self-control, self-esteem, autonomy need satisfaction, competence need satisfaction and relatedness need satisfaction were negatively associated with procrastination. That is, the greater the participants' depression, the greater their procrastination level; the higher their sense of self-esteem, the lower their procrastination, the greater their self-control, the lower their procrastination. Findings additionally suggested when participants' basic psychological need satisfaction increase, their procrastination levels decrease.

In addition, the results showed that depression was negatively related to all of the satisfaction of basic psychological needs; self-esteem was found positively associated with all of the satisfaction of basic psychological needs. These findings showed that high basic psychological need satisfaction is associated with low depression and high self-esteem. In addition self-control was also associated with high basic psychological need satisfaction.

Furthermore, consistent with the expectations, the correlation matrix showed a significant positive relationship between exogenous variables, namely between autonomy need satisfaction and competence need satisfaction; competence need satisfaction and relatedness need satisfaction; and autonomy need satisfaction and relatedness need satisfaction.

4.3 Path Analysis for Model Testing

There are two types of models for a path analysis: recursive models and fully recursive models (Klem, 1995). In fully recursive models, each variable has a

direct effect on all of the variables; on the other hand in a recursive model, one or more of the direct links are missing. According to Klem (1995), if a model is fully recursive, it always fits the observed data perfectly and reporting fit statistics is not necessary. In the present study, the model is recursive model, therefore fit statistics were presented.

4.3.1 Results of Fit Statistics

The fit statistics obtained from the path analysis were summarized in Table 4.3.

Table 4.3

Summary of Goodness of Fit Statistics for the Proposed Model

	χ^2	<i>df</i>	χ^2 / df	RMSEA	GFI	AGFI	NFI
Proposed model	1.92	2	.96	.00	1.00	.99	1.00

Note. RMSEA: Root mean Square Error of Approximation; GFI: Goodness of Fit Index; AGFI: Adjusted Goodness-of-Fit Index; NFI: Bentler-Bonnet Normed Fit Index

The path analysis showed that the data fit the model. As seen in Table 4.3 values of commonly used model fit criteria, chi-square (χ^2), the goodness-of-fit index (GFI), the adjusted goodness-of-fit index (AGFI), the root-mean-square error approximation (RMSEA) and Bentler-Bonnet normed fit index (Jöreskog & Sörbom, 1993) were presented.

The results showed that the value of the chi-square (χ^2) was 1.92, $p = .38$, which indicated a good fit. Also the chi-square's ratio to degrees of freedom (χ^2 / df) was calculated and it was found as .96, which implied a perfect fit given that the ratio in an ideal model would be 1 (G. Maruyama, 1997).

The other fit indices were found as RMSEA = .00; GFI = 1.00; AGFI = .99, NFI = 1, TLI = 1.00. These multiple indices confirmed the adequacy of the fit of the model. For a good fit, ideally, the RMSEA value should be less than .08 (Kline, 2015); values of GFI and AGFI expected to be greater than .90 (Kelloway, 1998); and value of NFI should be greater than .90 (Loehlin & Beaujean, 2016). Therefore, it was concluded that the present model cannot be rejected.

4.3.2 Results of Individual Paths

The results showed that most of the paths are statistically significant. The path model, with beta weights (standardized coefficients) was presented in Figure 4.3. Red arrows show significant paths, while black arrows show non-significant paths.

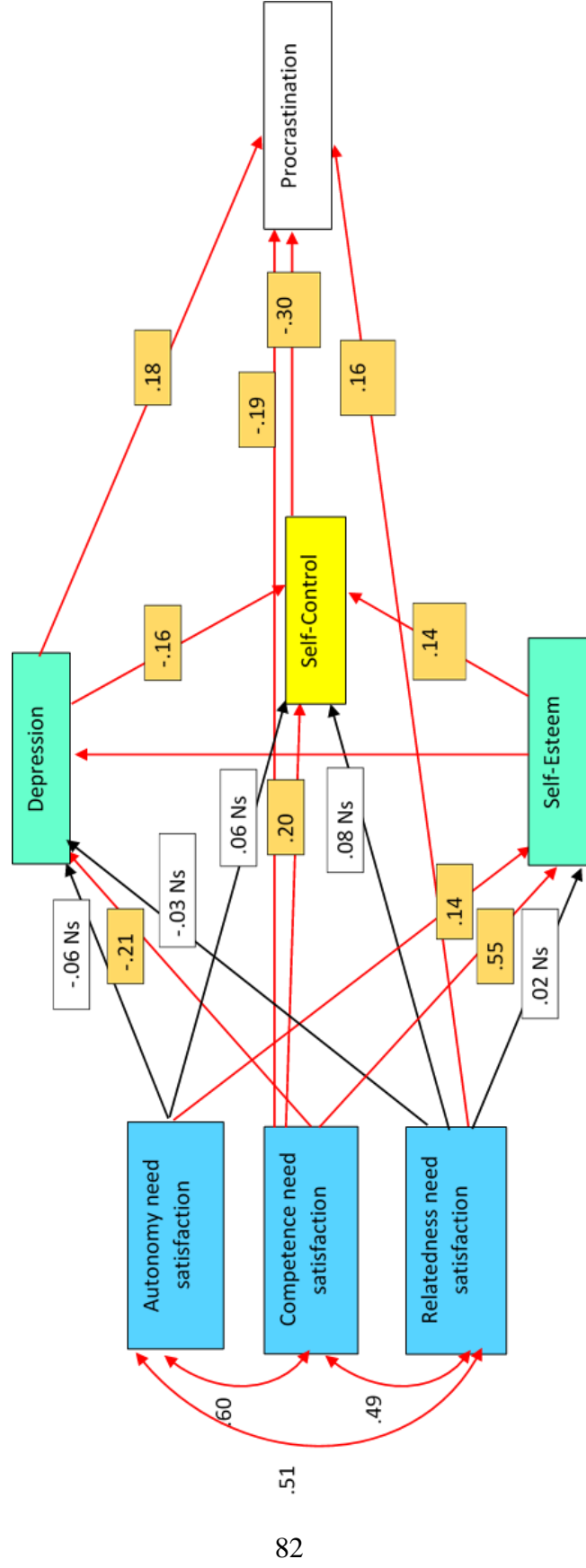


Figure 4.3 Standardized Path Coefficients for the Hypothesized Model

In the figure, the double headed arrows are used to show correlation between exogenous variables. The results showed that the relationship between autonomy need satisfaction and competence need satisfaction ($r = .60, n = 721, p < .05$); competence need satisfaction and relatedness need satisfaction ($r = .49, n = 721, p < .05$) and autonomy need satisfaction and relatedness need satisfaction ($r = .51, n = 721, p < .05$) were positive. The single-headed arrows are used to show the direction of relationship and the number above the arrows are standardized beta weights (β) which show the strength of the relationship. Standardized beta weights which are smaller than .10 can be considered as small effect, values around .30 show medium effect, and values which are greater than .50 indicate large effect (Kline, 2015). The regression coefficients ranged from .55 to -.33, meaning small to large in effect size.

4.3.3 Regression Equations for Direct Paths

The regression equations regarding the direct paths to procrastination, self-control, depression and self-esteem and and Squared Multiple Correlation Coefficients (R^2) were showed in the Table 4.4.

Table 4.4

Regression Equations and Squared Multiple Correlation Coefficients (R^2) for the Proposed Model

Regression Equation	R^2
Procrastination = (-.30) Self-control + (-.19) Competence need satisfaction + (.16) Relatedness need satisfaction + (.18) Depression + e*	.23
Self-Control = (.20) Competence need satisfaction + (-.16) Depression + (.14) Self-Esteem + e*	.25
Depression = (-.21) Competence need satisfaction + (-.33) Self-esteem + e*	.30
Self-esteem = (.14) Autonomy need satisfaction + (.55) Competence need satisfaction + e*	.43

*e = error variance

As seen in in Table 4.4, Self-control, competence need satisfaction, relatedness need satisfaction and depression predicted procrastination. These four variables explained 23% of the total variance in procrastination. Self-control was predicted from competence need satisfaction, depression and self-esteem. The total variance in self-control explained by these variables was 25%. Self-esteem was predicted from autonomy need satisfaction and competence need satisfaction. These two variables explained 30% of the total variance in depression. Lastly, depression was predicted from competence need satisfaction and self-esteem. These variables explained 43% of the total variance in self-esteem.

4.3.4 Direct and Indirect Associations

Bootstrapping which is a method for resampling from the original data to estimate standard errors and create the confidence intervals (Haukoos & Lewis, 2005) was used in examining direct and indirect relationships (set at 1000 and bias corrected bootstrap (BC) 95% confidence intervals). Indirect effects may be best tested with bootstrapping methods (Ingram, Cope, Harju, & Wuensch, 2000). The results showed that all direct effects from exogenous variables to mediator variables and endogenous variable were statistically significant except indirect path of relatedness to procrastination as seen in Table 4.5 ($\beta = -.03, p = .126$).

Table 4.5

Bootstrapped Results of Total, Indirect, and Direct Estimates

Paths	β	p	BC Interval
Paths among Endogenous Variables			
Self-control → Procrastination			
Total	-.30	.001	(-.358, -.016)
Direct	-.30	.001	(-.358, -.016)
Indirect	-		
Depression → Procrastination			
Total	.23	.001	(.168, .299)
Direct	.18	.001	(.123, .253)
Indirect	.05	.001	(.028, .071)
Self-esteem → Procrastination			
Total	-.12	.001	(-.156, -.087)
Direct	-		
Indirect	-.12	.001	(-.156, -.087)

Table 4.5 (cont'd)

Depression → Self-control			
Total	-.16	.002	(-.224, -.091)
Direct	-.16	.002	(-.224, -.091)
Indirect	-		
Self-esteem → Self-control			
Total	.19	.001	(.123, .260)
Direct	.14	.003	(.066, .209)
Indirect	.05	.001	(.030, .084)
Self-esteem → Depression			
Total	-.33	.001	(-.408, -.251)
Direct	-.33	.001	(-.408, -.251)
Indirect	-		
Paths among Autonomy Need Satisfaction and Endogenous Variables			
Autonomy Need Satisfaction →			
Procrastination	-.05	.012	(-.079, -.087)
Total	-		
Direct	-.05	.012	(-.079, -.087)
Indirect			
Autonomy Need Satisfaction →			
Depression	-.11	.012	(-.185, -.036)
Total	-.06	Ns	(-.140, .013)
Direct	-.05	.001	(-.077, -.025)
Indirect			
Autonomy Need Satisfaction →			
Self-esteem	.14	.001	(.079, .210)
Total	.14	.001	(.079, .210)
Direct	-		
Indirect			

Table 4.5 (cont'd)

Autonomy Need Satisfaction →			
Self-control	.10	Ns	(.008, .177)
Total	.06	Ns	(-.029, .142)
Direct	.04	.001	(.020, .061)
Indirect			
Paths among Competence Need Satisfaction and Endogenous Variables			
Competence Need Satisfaction →			
Procrastination	-.37	.001	(-.43, -.292)
Total	-.19	.001	(-.265, -.112)
Direct	-.18	.001	(-.216, -.137)
Indirect			
Competence Need Satisfaction →			
Depression	-.39	.001	(-.457, -.321)
Total	-.21	.001	(-.294, -.128)
Direct	-.18	.001	(-.236, -.135)
Indirect			
Competence Need Satisfaction →			
Self-esteem	.55	.001	(.494, .610)
Total	.55	.001	(.494, .610)
Direct	-		
Indirect			
Competence Need Satisfaction →			
Self-control	.35	.001	(.276, .418)
Total	.20	.001	(.120, .279)
Direct	.14	.001	
Indirect			

Table 4.5 (cont'd)

Paths among Relatedness Need Satisfaction and Endogenous Variables			
Relatedness Need Satisfaction →			
Procrastination	.13	.001	(.059, .197)
Total	.16	.001	(.092, .221)
Direct	-.03	Ns	(-.058, .002)
Indirect			
Relatedness Need Satisfaction →			
Depression	-.03	Ns	(-.108, .045)
Total			
Relatedness Need Satisfaction →			
Self-esteem	.02	Ns	(-.046, .077)
Total			
Relatedness Need Satisfaction →			
Self-control	.08	Ns	(.002, .154)
Total			

Note. Ns = Non-significant. The bias corrected 95% confidence interval of estimates resulting from bootstrap analysis was reported for BC intervals.

4.3.4.1 Relationships among Endogenous Variables

The results of the path analysis showed that, self-control has statistically significant direct effect on procrastination ($\beta = -.30, p < .05$), indicating that decreased self-control results in increased procrastination. Depression was also found as direct predictor of procrastination ($\beta = .18, p < .05$) suggesting that greater depression leads to greater procrastination. Besides, findings confirmed that depression is a significant predictor of self-control ($\beta = -.16, p < .05$). Thus, depression has also indirect effect on procrastination via self-control ($\beta = .05, p < .05$). These findings indicated that depression not only directly influenced procrastination but also directly affected self-control which in turn

affected procrastination. That is, self-control partially mediated the relationship between depression and procrastination. This model is partially mediated since it includes a direct path from depression to procrastination, and mediated paths through self-control. For clarity of the understanding of the results, paths were showed in the following.

Self-control → procrastination

Depression → procrastination

Depression → self-control

Depression → self-control → procrastination (partial mediation)

In addition, self-esteem was found as significant direct predictor of depression ($\beta = -.33, p < .05$), and depression is found as a significant predictor of self-control ($\beta = -.16, p < .05$) suggesting that lower self-esteem leads to greater depression. Thus, self-esteem has indirect effect on self-control via depression ($\beta = .05, p < .05$). This finding indicated that lower self-esteem leads to greater depression which in turn leads to lower self-control. As a result, depression partially mediated the relationship between self-esteem and self-control. Again for clarity of the understanding of results, paths were showed in the following.

Self-esteem → depression

Depression → self-control

Self-esteem → depression → self-control (partial mediation)

On the other hand, self-esteem also has both direct and indirect (through depression) effects on self-control ($\beta = .14, p < .05$; $\beta = .05, p < .05$ respectively). Since self-control and depression have also statistically significant direct effect on procrastination ($\beta = -.30, p < .05$ and $\beta = .18, p < .05$), self-esteem has indirect effect on procrastination via self-control and depression ($\beta = -.12, p < .05$). Thus, self-control partially mediated the

relationship between self-esteem and procrastination; and depression partially mediated the relationship between self-esteem and procrastination. Briefly, paths were showed in the following.

Self-esteem → self-control

Self-control → self-control

Depression → self-control

Self-esteem → self-control → procrastination (partial mediation)

Self-esteem → depression → procrastination (partial mediation)

4.3.4.2 Relationships among Autonomy Need Satisfaction and Endogenous Variables

With regard to autonomy need satisfaction, the path to self-control ($\beta = .06, p > .05$) and also total effect were ($\beta = .10, p > .05$) not significant. There is a high consensus among statisticians that even if the total effect is not significant, a significant indirect effect imply a mediation relationship (e.g. Hayes, 2009; Shrout & Bolger, 2002). Since there was a significant indirect effect of autonomy need satisfaction on self-control through self-esteem of ($\beta = .04, p < .05$), it can be concluded that self-esteem fully mediated the effect of autonomy need satisfaction on self-control.

Supporting to this mediation, a significant effect of autonomy need satisfaction on self-esteem was encountered ($\beta = .14, p < .05$), suggesting that higher autonomy need satisfaction leads to higher self-esteem. As mentioned before, self-esteem has also a direct effect on self-control ($\beta = .14, p < .05$). All of the significant direct and indirect relationships were showed briefly in the following.

ANS → self-esteem

Self-esteem → self-control

ANS → self-esteem → self-control (full mediation)

On the other hand, the path from autonomy need satisfaction to depression was not significant ($\beta = -.06, p > .05$). Since the path between autonomy need satisfaction and self-control was also not significant ($\beta = .06, p > .05$), it can be concluded that depression does not mediate the relationship between autonomy need satisfaction and self-control. However, as mentioned before, self-esteem has also a direct effect on depression ($\beta = -.33, p < .05$), self-esteem mediated the relationship between autonomy need satisfaction and depression ($\beta = -.05, p < .05$).

Self-esteem → depression

ANS → self-esteem → depression (partial mediation)

Lastly, autonomy need satisfaction has an indirect effect on procrastination via self-esteem and self-control ($\beta = -.05, p < .05$). Therefore, self-esteem and self-control fully mediated the effect of autonomy need satisfaction on procrastination. The path was showed in the following.

ANS → self-esteem → self-control → procrastination (full mediation)

4.3.4.3 Relationships among Competence Need Satisfaction and Endogenous Variables

The results of the path analysis showed that, competence need satisfaction predicts procrastination both directly ($\beta = -.19, p < .05$), and indirectly via ($\beta = -.18, p < .05$). Similarly, competence need satisfaction also predicts self-control both directly ($\beta = .20, p < .05$), and indirectly ($\beta = .14, p < .05$). Since as competence need satisfaction was found to have a statistically significant effect on depression ($\beta = -.21, p < .05$), and on self-esteem ($\beta = .55, p < .05$), there

are two indirect paths for the relationship between competence need satisfaction and self-control through depression and self-esteem.

Besides, since self-esteem predicted self-control ($\beta = .14, p < .05$), and competence need, self-esteem also partially mediated the relationship between competence need satisfaction and self-control. In addition, self-esteem also fully mediated the indirect relationship between competence need satisfaction and depression ($\beta = -.18, p < .05$). All of the significant direct and indirect relationships were showed briefly in the following.

CNS \rightarrow procrastination

CNS \rightarrow self-control

CNS \rightarrow depression

CNS \rightarrow self-esteem

Self-esteem \rightarrow self-control

CNS \rightarrow self-esteem \rightarrow depression (full mediation)

CNS \rightarrow depression \rightarrow self-control (partial mediation)

CNS \rightarrow self-esteem \rightarrow self-control (partial mediation)

In this direction, as previously mentioned self-control and depression have statistically significant direct effects on procrastination ($\beta = -.30, p < .05$; $\beta = .18, p < .05$), there is an indirect effect of competence need satisfaction on procrastination via all of self-esteem, depression and self-control ($\beta = -.18, p < .05$). These findings indicated that competence need satisfaction not only directly influenced procrastination but also directly affected self-esteem, depression and self-control which in turn affected procrastination via four indirect paths. Therefore, 1) only depression, 2) both depression and self-control, 3) both self-esteem and self-control and 4) only self-control partially mediated the relationship between competence need satisfaction and procrastination. The paths were showed in the following.

Self-control → procrastination

Depression → procrastination

CNS → depression → procrastination (partial mediation)

CNS → depression → self-control → procrastination (partial mediation)

CNS → self-esteem → self-control → procrastination (partial mediation)

CNS → self-control → procrastination (partial mediation)

4.3.4.4 Relationships among Relatedness Need Satisfaction and Endogenous Variables

The three direct paths from relatedness need satisfaction to depression ($\beta = -.03, p > .05$), to self-esteem ($\beta = .02, p > .05$) and to self-control ($\beta = .08, p > .05$) were not significant. As a result, there was no indirect relationship between relatedness need satisfaction and procrastination. However relatedness need satisfaction had a direct effect on procrastination ($\beta = .16, p < .05$), suggesting that increased relatedness need satisfaction leads to increased procrastination. The path was illustrated in the following.

RNS → procrastination

4.3.5 Hypotheses Testing

In this section, 31 hypotheses were tested based on the results of the analysis. 23 hypotheses were supported, while 8 of them were not supported. Abbreviations ANS, CNS, and RNS refer to autonomy, competence, and relatedness need satisfaction respectively.

✓ Hypothesis 1: The null hypothesis was rejected, Hypothesis 1 was accepted. A significant positive relationship was found between ANS and CNS ($r = .60, p < .05$).

✓ Hypothesis 2: The null hypothesis was rejected, Hypothesis 2 was accepted. A significant positive relationship was found between CNS and RNS ($r = .49, p < .05$).

✓ Hypothesis 3: The null hypothesis was rejected, Hypothesis 3 was accepted. A significant positive relationship was found between ANS and RNS ($r = .51, p < .05$).

Hypothesis 4: The null hypothesis was accepted, Hypothesis 4 was rejected. There were not a significant relationship between ANS and depression ($\beta = -.06, p > .05$).

Hypothesis 5: The null hypothesis was accepted, Hypothesis 5 was rejected. There were not a significant relationship between ANS and self-control ($\beta = .06, p > .05$).

✓ Hypothesis 6: The null hypothesis was rejected, Hypothesis 6 was accepted. There was a significant positive relationship between ANS and self-esteem ($\beta = .14, p < .05$).

✓ Hypothesis 7: The null hypothesis was rejected, Hypothesis 7 was accepted. A significant negative relationship was found between CNS and procrastination ($\beta = -.19, p < .05$).

✓ Hypothesis 8: The null hypothesis was rejected, Hypothesis 8 was accepted. A significant negative relationship was found between CNS and depression ($\beta = -.21, p < .05$).

✓ Hypothesis 9: The null hypothesis was rejected, Hypothesis 9 was accepted. There was a significant positive relationship between CNS and self-control ($\beta = .20, p < .05$).

✓ Hypothesis 10: The null hypothesis was rejected, Hypothesis 10 was accepted. A significant positive relationship was found between CNS and self-esteem ($\beta = .55, p < .05$).

Hypothesis 11: The null hypothesis was accepted, Hypothesis 11 was rejected. There were not a significant relationship between RNS and depression ($\beta = -.03, p > .05$).

Hypothesis 12: The null hypothesis was accepted, Hypothesis 12 was rejected. There were not a significant relationship between RNS and self-control ($\beta = .08, p > .05$).

✓ Hypothesis 13: The null hypothesis was rejected, Hypothesis 13 was accepted. A significant positive relationship was found between RNS and procrastination ($\beta = .16, p < .05$).

Hypothesis 14: The null hypothesis was accepted, Hypothesis 14 was rejected. The association between RNS and self-esteem was not significant ($\beta = .02, p > .05$).

✓ Hypothesis 15: The null hypothesis was rejected, Hypothesis 15 was accepted. A significant negative relationship was found between self-esteem and depression ($\beta = -.33, p < .05$).

✓ Hypothesis 16: The null hypothesis was rejected, Hypothesis 16 was accepted. There was a significant negative relationship between depression and self-control ($\beta = -.16, p < .05$).

✓ Hypothesis 17: The null hypothesis was rejected, Hypothesis 17 was accepted. There was a significant positive relationship between self-esteem and self-control ($\beta = .14, p < .05$).

✓ Hypothesis 18: The null hypothesis was rejected, Hypothesis 18 was accepted. There was a significant positive relationship between depression and procrastination ($\beta = .18, p < .05$).

✓ Hypothesis 19: The null hypothesis was rejected, Hypothesis 19 was accepted. There was a significant negative relationship between self-control and procrastination ($\beta = -.30, p < .05$).

✓ Hypothesis 20: The null hypothesis was rejected, Hypothesis 20 was accepted. ANS was associated with depression through self-esteem significantly ($\beta = -.05, p < .05$).

✓ Hypothesis 21: The null hypothesis was rejected, Hypothesis 21 was accepted. CNS was associated with depression through self-esteem significantly ($\beta = -.18, p < .05$).

Hypothesis 22: The null hypothesis was accepted, Hypothesis 22 was rejected. The association between RNS and depression through self-esteem was not significant ($\beta = -.03, p > .05$).

✓ Hypothesis 23: The null hypothesis was rejected, Hypothesis 23 was accepted. There was a significant association between ANS and self-control through self-esteem ($\beta = .04, p < .05$).

ANS → self-esteem → self-control

✓ Hypothesis 24: The null hypothesis was rejected, Hypothesis 24 was accepted. There was a significant association between CNS and self-control through both self-esteem and depression ($\beta = .14, p < .05$).

CNS → depression → self-control

CNS → self-esteem → self-control

Hypothesis 25: The null hypothesis was accepted, Hypothesis 25 was rejected. The relationship between RNS and self-control through both self-esteem and/or depression was not significant ($\beta = .08, p > .05$).

✓ Hypothesis 26: The null hypothesis was rejected, Hypothesis 26 was accepted. The relationship between ANS and self-esteem was significant which leads to the self-control and then to procrastination ($\beta = -.05, p < .05$).

ANS → self-esteem → self-control → procrastination

✓ Hypothesis 27: The null hypothesis was rejected, Hypothesis 27 was accepted. All of the indirect effects were found statistically significant ($\beta = -.18, p < .05$).

CNS → depression → procrastination

CNS → depression → self-control → procrastination

CNS → self-esteem → self-control → procrastination

CNS → self-control → procrastination

Hypothesis 28: The null hypothesis was accepted, Hypothesis 28 was rejected.

None of the relationships were significant ($\beta = -.03, p > .05$).

✓ Hypothesis 29: The null hypothesis was rejected, Hypothesis 29 was accepted. The relationship between self-esteem and self-control through depression was significant ($\beta = .05, p < .05$).

✓ Hypothesis 30: The null hypothesis was rejected, Hypothesis 30 was accepted. The relationship between self-esteem and procrastination through depression and self-control was significant ($\beta = -.12, p < .05$).

Self-esteem → depression → procrastination

Self-esteem → self-control → procrastination

✓ Hypothesis 31: The null hypothesis was rejected, Hypothesis 31 was accepted. The relationship between depression and procrastination through self-control was significant ($\beta = .05, p < .05$).

Depression → self-control → procrastination

4.4 Summary of the Results

First of all, the assumptions of the path analysis were checked and satisfied. The analysis verified the proposed model. The overall results showed that all of the basic psychological needs satisfactions were associated with procrastination directly or indirectly. Specifically, competence need satisfaction predicted

procrastination both directly and through depression and self-control. Relatedness need satisfaction predicted procrastination directly, while autonomy need satisfaction predicted procrastination through the indirect effect of self-esteem and self-control. That is, students who satisfied their competence needs less have more depression and less self-control, which in turn results in more procrastination. Also, low autonomy need satisfaction is associated with high procrastination when students have more self-esteem and more-self-control. On the other hand, students who satisfied their relatedness need more have more procrastination. Therefore, the proposed model explained procrastination from a need based perspective.

CHAPTER 5

DISCUSSION

This chapter includes the discussion of direct, indirect and total effects in the light of relevant literature. In addition, both theoretical and practical implications of the results and recommendations for future research were offered.

5.1 Discussion of the Findings

In the current study, the role of basic psychological needs satisfaction (autonomy, competence and relatedness) in predicting procrastination through the indirect effect of depression, self-esteem and self-control was investigated. Based on SDT, a path model was generated and tested through path analysis. The results indicated that the hypothesized model was significant.

The overall model accounted for 23% of variance in procrastination, while 43% variance in self-esteem, 30% variance in depression, and 25% variance in self-control. That is, students who had a low level of competence and autonomy need satisfaction and a high level of relatedness need satisfaction scores tended to have high procrastination when they had high level of depression and low level of self-esteem and self-control. In this direction, direct, indirect and total relationships were taken into consideration and discussed in the light of related literature.

5.1.1 Discussion of the Direct Effects

Considering the aforementioned hypotheses, 14 direct effects were supported and five direct effects were not supported in the model. The discussion of the direct effects were presented in following headings 1) exogenous variables; 2) endogenous variables; and 3) basic psychological needs satisfaction and endogenous variables.

5.1.1.1 Direct Relationships among Exogenous Variables

In the present study, results indicated a positive significant relationship between all of the basic psychological needs (Hypotheses 1, 2, 3). That is, the more students satisfy their autonomy needs, the more they satisfy their competence and relatedness needs. Same result is relevant for all three needs, when the satisfaction of one need increases, the satisfaction of other two needs also increase. This result supports the previous studies which indicated that all of the three needs tend to be moderately correlated each other (Deci & Ryan, 2000; Nishimura & Suzuki, 2016). In the study of Ryan (1993), people display optimal engagement and psychological well-being, when their competence and relatedness feelings result from their autonomy. That is, when people are capable of satisfy all of their basic psychological needs in balance, they may behave with volition and choice rather than pressure and demand (Ryan, 1993).

5.1.1.2 Direct Relationships among Endogenous Variables

There were five hypotheses (Hypotheses 15, 16, 17, 18, 19) regarding the direct relationship among endogenous variables in the current study. A significant negative relationship was found between self-esteem and depression. The finding was supportive of previous findings indicated that low self-esteem operates as a risk factor for depression (A. T. Beck, 1967; Orth et

al., 2014) and many longitudinal studies showed that low self-esteem predicts depression (e.g. Kernis, 2003; Orth et al., 2014). Furthermore, according to SDT perspective, if people have self-esteem problems instead of an operating true self-esteem, this leads to psychological health problems such as depression (Ryan & Brown, 2003). In other words, optimal health occurs more likely when self-esteem is not a concern, hence the worth of self is not an issue. In contrast to this point of view, some other researches indicated that low self-esteem is a consequence of depression (Coyne, Gallo, Klinkman, & Calarco, 1998; Shahar & Davidson, 2003). With an integrative point of view, it seems that self-esteem might be both an antecedent and consequence of depression. In SDT theoretical framework, the current study followed the line of self-esteem as a predictor of depression and then from this path to predict procrastination.

Findings also showed a significant negative relationship between depression and self-control. Students who have lower level of depression have more self-control. As Brinkmann and Franzen (2015) mentioned, depression is associated with a broad range of processes that are related to the self-regulation of behavior. Also in the study of Uzun Özer et al. (2014) which is conducted with undergraduate students, not only depression was found associated with self-control, but also self-control was found as a mediator variable between depression and procrastination. On the other hand, similar to self-esteem literature, depression has been also found as a disorder of self-regulation in some other researches (Strauman, 2002) which implies low self-control predicts depression. Since depression is highly related with procrastination, the present study includes depression as a predictor of self-control which in turn leads to procrastination.

In addition, there was a significant positive association between self-esteem and self-control. That is, as self-esteem of people decreased, their self-control level also decreases. In the literature there is limited research regarding these

two concepts. In the SDT approach, fragile self-esteem is seen as related to lack of autonomous self-regulation (Deci & Ryan, 1991; Ryan & Brown, 2003).

Findings also showed a significant positive relationship between depression and procrastination which means that the more depression students have, the more they tend to procrastinate. This was an expected result in light of related literature. As implied by various studies conducted with undergraduates (e.g. Beswick et al., 1988; Senécal et al., 1995; Uzun Özer et al., 2014), there is a significant relationship between procrastination and depression.

Lastly, there was a significant negative association between self-control and procrastination. This result showed that the less self-control students have, the more they tend to procrastinate. This finding was validated by the previous studies that demonstrated self-control is one of the strongest predictors of procrastination (e.g. E. M. Anderson, 2001; Uzun Özer, 2010; Wolters, 2003).

5.1.1.3 Direct Relationships among Basic Psychological Needs Satisfaction and Endogenous Variables

Related to this part, the hypotheses from 4 to 14 were relevant. The findings indicated a significant positive relationship between autonomy and competence need satisfaction and self-esteem. That is, when students satisfy their autonomy and competence need more, they tend to have higher self-esteem. However, on contrary to expectations, relatedness need satisfaction was not found significantly related to self-esteem. In the literature, it is mentioned that the less the basic psychological needs satisfaction (one or more needs) students have, the more they concern with the worth of their selves (e.g. Ryan & Brown, 2003; Sheldon et al., 1996). That is, because of lacking of a sense of love, authenticity or effectiveness, people don't feel worthy. Sheldon et al. (1996)

also indicated autonomy and competence need satisfaction are related to self-esteem positively. In terms of these, the findings of the current study regarding the relationship between autonomy need satisfaction and self-esteem; and competence need satisfaction and self-esteem support the previous findings. Unexpected result regarding the relationship between relatedness need satisfaction and self-esteem might be related to the difference between mean values of relatedness need satisfaction and the other two needs satisfaction of the participants. Relatively high scores in relatedness need satisfaction may imply an imbalance between three needs satisfaction of the participants such that they satisfy their relatedness need more than the other needs. Therefore, it had no effect on self-esteem. However, this result may also be considered as a support of the SDT argument that self-esteem is a concern only when there is a need satisfaction problem.

The findings did not indicate significant relationships between both autonomy need satisfaction and self-control and relatedness need satisfaction and self-control. Only competence need satisfaction was found positively associated with self-control. In the literature, there are studies which show the direct relationship between basic psychological needs satisfaction and self-control; however, they took three needs together such as Hanfstingl, Andreitz, Müller, and Thomas (2010) and Orkibi and Ronen (2017) found that basic psychological needs satisfaction and self-control are positively and highly related with each other. Also, need frustration is related to lessened self-control, because it erodes available energy (Moller, Deci, & Ryan, 2006). Especially competence need satisfaction might be related to self-control, since it includes the degree to which the person feels effective in their interactions with the social environment (Deci & Ryan, 2000). Therefore, if the people experience they can affect their environment, then they can show much more willingness to control their impulses to engage in behaviors that have known cost to the self (Metcalfe & Mischel, 1999). Similarly, both the relationships

between autonomy need satisfaction and depression and relatedness need satisfaction and depression were not significant. Competence need satisfaction and depression was negatively related to each other. In line with the literature, the more students have competence need satisfaction, the less they had depression (B. Chen et al., 2015).

Finally, for direct relationships, the results verified that there were a significant negative relationship between competence need satisfaction and procrastination and a significant positive relationship between relatedness need satisfaction and procrastination. That is, the higher competence need satisfaction relates to lower procrastination while the higher relatedness need satisfaction is related to higher procrastination. In the literature, there is only one study which mentions basic psychological needs satisfaction and procrastination relates negatively, however it took three needs together (Çavuşoğlu & Karataş, 2015). In the current study, unexpected result regarding the relationship between relatedness need satisfaction and procrastination might be related to the difference between mean values of relatedness need satisfaction and the other two needs satisfaction of the participants. Relatively high scores in relatedness need satisfaction may imply an imbalance between three needs satisfaction of the participants such that they satisfy their relatedness need more than the other needs. They may more concern about feeling connected to others and belongingness and this imbalance for satisfying the all three needs may lead to high procrastination.

5.1.2 Discussion of the Indirect Effects

In this part, indirect relationships in the proposed model were discussed. Similarly to direct effects, discussions of indirect effects were given in two parts: 1) among endogenous variables; and 2) among basic psychological needs satisfaction and endogenous variables.

5.1.2.1 Indirect Relationships among Endogenous Variables

With regard to indirect relationships among endogenous relationships in the proposed model, there were three related hypotheses (Hypotheses 29, 30, 31). Self-esteem was found indirectly and positively related to self-control through depression. That is, students who had higher self-esteem have higher self-control when they had a low level of depression. Besides, the results indicated that self-esteem has a negative indirect effect on procrastination via both depression and self-control. That is, more self-esteem was associated with less procrastination when students have less depression and more self-control.

Taken together these three indirect associations, since there is a lack of research on indirect effect of depression with proposed variables, direct associations may give an inspiration. As the literature showed the direct relationships of self-esteem and self-control with depression (e.g. A. T. Beck, 1967; Kernis, 2003; Orth et al., 2014); and the direct relationships of depression and procrastination with self-control (e.g. Beswick et al., 1988; Brinkmann & Franzen, 2015; Senécal et al., 1995). These results are somewhat coherent with studies indicating that self-esteem problems were a crucial factor in psychological health problems such as depression and procrastination through self-control (Ryan & Brown, 2003).

The findings also showed that depression had a positive indirect effect on procrastination via self-control. Thus, the relationship between depression and procrastination was still significant with the effect of self-control. The significant positive total effects were also supported the relationship between depression and procrastination. This finding indicated that more depression was associated with more procrastination when students had less self-control. The finding supported previous findings indicated depression had a positive effect on procrastination through indirect effect of self-control (Uzun Özer et

al., 2014). As Carver and Scheier (1981) indicated vital role of self-control is to keep close track of one's actions and states; because, if people stop to monitor themselves or their goals are not clear and consistent or they tend to lose control. Moreover, even if they delay to study impulsively, rather than preventing delaying to occur they can override the response sequence and prevent it from leading to procrastination. When they depressed, they might block their self-control via these ways, which in turn leads to procrastination. Therefore, the problematic part is not attempting to delay, but a lack of self-control (based on self-esteem problems and depression) to prevent the leading path to procrastination.

5.1.2.2 Indirect Relationships among Basic Psychological Needs Satisfaction and Endogenous Variables

Related to this part, there were nine hypothesis (Hypotheses from 20 to 28), three for each basic psychological need. There was no study in the literature investigating the indirect effects of self-esteem, depression and self-control between basic psychological needs satisfaction and procrastination. Due to this lack of research, direct associations might give an inspiration.

As the literature showed the direct relationships of autonomy and competence need satisfaction are related to self-esteem positively (Sheldon et al., 1996); basic psychological needs satisfaction and self-control are positively and highly related with each other (Hanfstingl et al., 2010); competence need satisfaction and depression was negatively related to each other (B. Chen et al., 2015); and basic psychological needs satisfaction and procrastination relates negatively (Çavuşoğlu & Karataş, 2015), most of the indirect associations were validated as expected based on self-determination theory.

Firstly, autonomy need satisfaction was found indirectly and negatively related to depression through self-esteem. That is students who had high autonomy need satisfaction had high self-esteem, which in turn, had low depression. Also the findings showed a positive indirect relationship between autonomy need satisfaction and self-control through self-esteem. That is, the relationship between autonomy need satisfaction and self-control was still significant with the effect of self-esteem. This indicated that more autonomy need satisfaction was related to more self-control when students had more self-esteem. In addition, autonomy need satisfaction was found related to procrastination indirectly and negatively through self-esteem to self-control path. In other words, students who had high autonomy need satisfaction had more self-esteem and less procrastination.

The findings also showed a negative indirect relationship between competence need satisfaction and depression through self-esteem. Thus, more competence need satisfaction was associated with less depression when students had more self-esteem. Also, competence need satisfaction was found related to self-control through both depression and self-esteem. This finding indicated that more competence need satisfaction was associated with more self-control when students had less depression and more self-esteem.

Furthermore, competence need satisfaction was found negatively associated with procrastination through four paths namely: 1) CNS→ depression → procrastination, 2) CNS→ depression → self-control → procrastination, 3) CNS→ self-esteem → self-control → procrastination, 4) CNS→ self-control → procrastination. The hypotheses were validated. That is, more competence need satisfaction was associated with less procrastination when students 1) were less depressed 2) were less depressed and had more self-control 3) had more self-esteem and more self-control 4) had more self-control.

Among relatedness need satisfaction and endogenous variables, none of indirect relationships was supported. Namely, there were no significant indirect relationship between relatedness need satisfaction and depression through self-esteem. Also, indirect relationship between relatedness need satisfaction and self-control through self-esteem and/or depression were not supported. Finally, relatedness need satisfaction was not associated with procrastination through none of three mediators.

Overall, the present research was the first study investigating the proposed relationships between basic psychological need satisfaction, self-esteem, depression, self-control and procrastination based on self-determination theory. Competence need satisfaction was the most effective variable in predicting procrastination through all mediators. This finding supported the view that the way to cope with procrastination is learning how to engage in a task. Since competence need satisfaction which includes the degree to which the people feel effective in their interactions with their social environment, may be a central factor to engage a task. Also the finding that showed higher relatedness need satisfaction was associated to higher procrastination, provided a support for the importance of satisfying needs in balance. When one of the needs was satisfied too much, the other needs may suffer and therefore procrastination may occur again. These findings extended the literature on procrastination.

5.2 Implications for Practice

Considering procrastination as a compensatory motive for unfulfilled basic psychological needs may be a valuable tool for practitioners while working with procrastinators. In light of the present study, for the persistent, tiring and frustrating experience of procrastination, the first step may be knowing that procrastination can be the best way which the person knows to do and can do at that time for the satisfaction of his/her needs—as a self-protective process. At this base, approaching the person without negative labels (e.g. lazy,

unsuccessful, and useless) and with respect (nobody can say a person “do not protect you”) can be valuable tools to understand the needs of the clients. After understanding its value and place in the person’s life, she or he can choose to continue to do that or resists it and continues with the change process.

The significant finding in the current study indicated that satisfaction of three basic psychological needs to be in balance, especially satisfaction of competence need may prevent procrastination via their effects on self-esteem, depression and self-control. This finding should be considered by practitioners who provide counseling services on university campuses. The practitioners may take this finding into consideration while designing and providing services to prevent procrastination such as basic psychological needs awareness groups for students. The level of the needs satisfaction among students with a balance would contribute positively to engagement with academic tasks and the other tasks related to personal maintenance (i.e. eating, sleeping, cleaning), leisure (i.e. socializing, watching TV) and spiritual activities. Therefore, they can be able to engage with one task at a time as fully as possible, and to disengage when the task is accomplished. At the same time, especially competence need satisfaction which includes the degree to which the people feel effective in their interactions with the social environment may be central to prevent procrastination.

In addition, high procrastination is found associated with high relatedness need satisfaction in the present study. The practitioners also should pay attention to help the clients get aware and balance their competence and relatedness needs satisfaction, arrange these needs in personal importance order, and learn to support themselves to find or built appropriate ways and resources to satisfy them.

5.3 Recommendations for Further Research

Considering the design of the study, this study was a correlational study in which correlations were tested and the predictive role of variables were reported via self-report measures. It is difficult to measure various different experiences of procrastination tendencies of individuals with only quantitative research methods. Hence, individuals who procrastinate are not a homogenous group. For example, in the present study, there were participants who have high procrastination tendency with very high cumulative GPAs and also very low cumulative GPAs. That is subjective judgments regarding delaying may include very different perceptions. Therefore, further investigations with qualitative and mixed methods may provide more detailed opportunity to understand the nature of procrastination.

In relation to basic psychological needs satisfaction, longitudinal studies can give further information about the relation how changes in basic psychological needs satisfaction affect procrastination. Hence basic psychological needs satisfaction can increase or decrease in different times in the lives of people.

Another recommendation can be with regard to the sample. In the present study, participants consisted of undergraduate university students from a private university in Ankara and thus, findings can be generalized only university student populations. In the future, the experience of procrastination as a compensatory motive should be examined in varying populations such as high school students, graduate students, and adults. Because, basic psychological needs satisfaction process can be different in different age groups. For example, graduate students can be considered as emerging adults who cope with mostly career and family issues which is different from the undergraduate students who recently began to take regarding their own life. Feeling effective in their interactions with the social environment, that is

competence need satisfaction levels, may be affected by these very different issues and environmental conditions.

The present study is an attempt to investigate procrastination within a need based theoretical approach. There is no doubt that factors that may affect procrastination tendencies of people are not restricted to the ones that have been examined in the current study. The elasticity of the need based approaches (i.e. SDT, Gestalt therapy approach) provides researchers the opportunity to investigate various factors which may account for the individual differences in the experience of procrastination. There can be many needs that the people try to satisfy in various ways, if they are not aware of why they want to do all of them, they can feel overwhelmed.

Although the total variance in procrastination explained by the variables used in the present study namely, self-control, competence need satisfaction, relatedness need satisfaction and depression were not small the rest could be explained by several other factors such as perfectionism (Flett et al., 1992; Stöber & Joormann, 2001), fear of failure (Ferrari, 1991a), task difficulty (Ackerman & Gross, 2005), boredom proneness (Blunt & Pychyl, 1998; Vodanovich & Rupp, 1999), rumination (Cohen & Ferrari, 2010), regret (Ferrari et al., 2009) and creativity (Cohen & Ferrari, 2010). Future studies may include these variables to understand their role in procrastination and related variables.

Lastly, in order to assess the effectiveness of implications of SDT approach to procrastination, studies suggesting procrastination intervention programs need to be conducted. For this, it is necessary for researchers to conduct more research regarding procrastination in a need based approach that may account for detailed aspects of the construct.

REFERENCES

- Abramson, L. Y., Metalsky, G. I., & Alloy, L. B. (1989). Hopelessness depression: A theory-based subtype of depression. *Psychological Review*, *96*(2), 358.
- Ackerman, D. S., & Gross, B. L. (2005). My instructor made me do it: Task characteristics of procrastination. *Journal of Marketing Education*, *27*(1), 5-13.
- Anderson, E. M. (2001). *The relationships among task characteristics, self-regulation and procrastination*. ProQuest Information & Learning,
- Anderson, J. H. (2016). Structured Nonprocrastination: Scaffolding Efforts to Resist the Temptation to Reconstruct Unwarranted Delay. *Procrastination, Health, and Well-Being*, 43.
- Anderson, P. (1996). Guidelines on sensible drinking. *Addiction*, *91*(1), 25-33.
- APA. (2006). *Publication Manual of the American Psychological Association*: American Psychological Association.
- Arbuckle, J. L. (2014). IBM SPSS Amos 23 user's guide. *Crawfordville, FL: Amos Development Corporation*.
- Ariely, D., & Wertenbroch, K. (2002). Procrastination, deadlines, and performance: Self-control by precommitment. *Psychological Science*, *13*(3), 219-224.
- Balkis, M., Duru, E., & Bulus, M. (2013). Analysis of the relation between academic procrastination, academic rational/irrational beliefs, time preferences to study for exams, and academic achievement: a structural model. *European journal of Psychology of Education*, *28*(3), 825-839.
- Barker, C., Pistrang, N., & Elliott, R. (2015). *Research Methods in Clinical Psychology: An Introduction for Students and Practitioners*. Chichester: Wiley.

- Barron, J. W. (1998). *Making diagnosis meaningful: Enhancing evaluation and treatment of psychological disorders*. Washington, DC, US: American Psychological Association.
- Baumeister, R. F. (1999). *The Self in Social Psychology*. New York, NY, US: Psychology Press.
- Baumeister, R. F., & Heatherton, T. F. (1996). Self-regulation failure: An overview. *Psychological Inquiry*, 7(1), 1-15.
- Beck, A. T. (1967). *Depression: Clinical, experimental, and theoretical aspects*. New York: Hoeber Medical Division, Harper & Row.
- Beck, B. L., Koons, S. R., & Milgrim, D. L. (2000). Correlates and consequences of behavioral procrastination: The effects of academic procrastination, self-consciousness, self-esteem and self-handicapping. *Journal of Social Behavior and Personality*, 15(5), 3.
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588.
- Berry, W. D. (1993). *Understanding Regression Assumptions*. Newbury Park: SAGE Publications.
- Beswick, G., Rothblum, E. D., & Mann, L. (1988). Psychological antecedents of student procrastination. *Australian Psychologist*, 23(2), 207-217.
- Bilgel, N., & Bayram, N. (2010). Turkish Version of the Depression Anxiety Stress Scale (DASS-42): Psychometric Properties. *Archives of Neuropsychiatry/Noropsikiatri Arsivi*, 47(2), 118-126.
- Blasi, A. (1988). Identity and the development of the self. In D. K. Lapsley & F. C. Power (Eds.), *Self, ego, and identity* (pp. 226-242). New York: Springer-Verlag.
- Blatt, S. J., Quinlan, D. M., Chevron, E. S., McDonald, C., & Zuroff, D. (1982). Dependency and self-criticism: psychological dimensions of depression. *Journal of Consulting and Clinical Psychology*, 50(1), 113.

- Blunt, A., & Pychyl, T. A. (1998). Volitional action and inaction in the lives of undergraduate students: State orientation, procrastination and proneness to boredom. *Personality and Individual Differences*, 24(6), 837-846.
- Blunt, A., & Pychyl, T. A. (2000). Task aversiveness and procrastination: A multi-dimensional approach to task aversiveness across stages of personal projects. *Personality and Individual Differences*, 28(1), 153-167.
- Boyd, D. R., & Bee, H. L. (2013). *The Developing Child*. London: Pearson Education.
- Brinkmann, K., & Franzen, J. (2015). Depression and self-regulation: A motivational analysis and insights from effort-related cardiovascular reactivity. In *Handbook of biobehavioral approaches to self-regulation* (pp. 333-347). New York: Springer.
- Brinthaup, T. M., & Shin, C. M. (2001). The relationship of academic cramming to flow experience. *College Student Journal*, 35(3), 457-471.
- Briody, R. (1980). *An exploratory study of procrastination*. (Doctoral dissertation), Brandeis University, Dissertation Abstracts International. (41(2-A))
- Brownlow, S., & Reasinger, R. D. (2000). Putting off until tomorrow what is better done today: Academic procrastination as a function of motivation toward college work. *Journal of Social Behavior and Personality*, 15(5), 15.
- Burka, J. B., & Yuen, L. M. (1983). *Procrastination: why you do it, what to do about it*. Reading, MA: Addison Wesley Pub. Co.
- Carver, C. S., & Scheier, M. F. (1981). Self-consciousness and reactance. *Journal of Research in Personality*, 15(1), 16-29.
- Chen, B., Vansteenkiste, M., Beyers, W., Boone, L., Deci, E. L., Van der Kaap-Deeder, J., . . . Mouratidis, A. (2015). Basic psychological need satisfaction, need frustration, and need strength across four cultures. *Motivation and Emotion*, 39(2), 216-236.

- Chen, B. B., & Qu, W. (2017). Life history strategies and procrastination: The role of environmental unpredictability. *Personality and Individual Differences, 117*, 23-29.
- Chu, A. H. C., & Choi, J. N. (2005). Rethinking procrastination: Positive effects of "active" procrastination behavior on attitudes and performance. *The Journal of Social Psychology, 145*(3), 245.
- Cihangir-Çankaya, Z., & Bacanlı, H. (2003). İhtiyaç doyum ölçeği uyarlama çalışması. VII. Ulusal Psikolojik Danışma ve Rehberlik Kongresinde sunulan bildiri. İnönü Üniversitesi, Malatya.
- Cohen, J. R., & Ferrari, J. R. (2010). Take some time to think this over: The relation between rumination, indecision, and creativity. *Creativity Research Journal, 22*(1), 68-73.
- Coopersmith, S. (1967). *Coopersmith self-esteem inventory form A*. Palo Alto, CA: Self-Esteem Institute.
- Corkin, D. M., Shirley, L. Y., & Lindt, S. F. (2011). Comparing active delay and procrastination from a self-regulated learning perspective. *Learning and Individual Differences, 21*(5), 602-606.
- Costa, P. T., & McCrae, R. R. (1992). *Set like plaster? Evidence for the stability of adult personality*. Washington, DC: American Psychological Association.
- Covington, M. V., & Beery, R. G. (1976). *Self-worth and school learning*. New York: Holt, Rinehart and Winston.
- Coyne, J. C., Gallo, S. M., Klinkman, M. S., & Calarco, M. M. (1998). Effects of recent and past major depression and distress on self-concept and coping. *Journal of Abnormal Psychology, 107*(1), 86.
- Crandall, J. E. (1973). Sex differences in extreme response style: Differences in frequency of use of extreme positive and negative ratings. *The Journal of Social Psychology, 89*(2), 281-293.
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal performance*. In. New York: Harper and Row.

- Çavuşoğlu, C., & Karataş, H. (2015). Academic Procrastination of Undergraduates: Self-determination Theory and Academic Motivation. *The Anthropologist*, 20(3), 735-743. doi:10.1080/09720073.2015.11891780
- Çelik, Ş. (2004). *The effects of an attachment-oriented-psychoeducational-group-training on improving the preoccupied attachment styles of university students*. Middle East Technical University,
- Çuhadaroglu, F. (1986). Adölesanlarda Benlik Saygısı. Uzmanlık Tezi, Hacettepe Üniversitesi Tıp Fakültesi Psikiyatri Anabilim Dalı, Ankara. In.
- Dağ, İ. (1991). Rosenbaum'un Öğrenilmiş Güçlülük Ölçeği'nin üniversite öğrencileri için güvenilirliği ve geçerliği. *Türk Psikiyatri Dergisi*, 2(4), 269-274.
- Day, K., Dobson, K., Schmidt, L., Ferro, M., Saigal, S., Boyle, M., & Van Lieshout, R. (2018). Exposure to overprotective parenting and psychopathology in extremely low birth weight survivors. *Child Care, Health and Development*, 44(2), 234-239.
- Day, V., Mensink, D., & O'Sullivan, M. (2000). Patterns of academic procrastination. *Journal of College Reading and Learning*, 30(2), 120-134.
- Deci, E. L., & Flaste, R. (1995). *Why we do what we do: The dynamics of personal autonomy*. New York: GP Putnam's Sons.
- Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality. In R. A. Dienstbier (Ed.), *Perspectives on Motivation* (Vol. 38, pp. 237): Rochester, UK.
- Deci, E. L., & Ryan, R. M. (2000). The " what" and " why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.
- Deci, E. L., & Ryan, R. M. (2002). *Handbook of self-determination research*: University Rochester Press.

- Digdon, N. L., & Howell, A. J. (2008). College students who have an eveningness preference report lower self-control and greater procrastination. *Chronobiology International*, 25(6), 1029-1046.
- Dryden, W. (2012). Dealing with procrastination: The REBT approach and a demonstration session. *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 30(4), 264-281.
- Eckert, M., Ebert, D. D., Lehr, D., Sieland, B., & Berking, M. (2016). Overcome procrastination: Enhancing emotion regulation skills reduce procrastination. *Learning and Individual Differences*, 52, 10-18.
- Edwards, G. (1996). Sensible drinking: doctors should stick with the independent medical advice. *British Medical Journal*, 312(7022), 1-2.
- Ellis, A. (1995). Changing rational-emotive therapy (RET) to rational emotive behavior therapy (REBT). *Journal of Rational-Emotive & Cognitive-Behavior Therapy*, 13(2), 85-89.
- Ellis, A., & Knaus, W. J. (1979). *Overcoming procrastination: or, how to think and act rationally in spite of life's inevitable hassles*. New York: New American Library.
- Engberding, M., Frings, E., Höcker, A., Wolf, J., & Rist, F. (2011). *Is procrastination a symptom or a disorder like other Axis-I-disorders in the DSM*. Paper presented at the Steps towards delineating a case definition. July Presentation given at the 7th Biennial Conference on Procrastination, Amsterdam, The Netherlands. Abstract retrieved from <http://www.fmg.uva.nl/procrastinationconference2011/programme.cfm>.
- Eysenck, H. J., & Eysenck, M. W. (1985). *Personality and Individual Differences: A Natural Science Approach*. New York: Springer US.
- Faber, R. J., & Vohs, K. D. (2004). To buy or not to buy?: Self-control and self-regulatory failure in purchase behavior. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of self-regulation: Research, theory, and applications*. NY, US: Guilford Press.
- Farran, B. (2004). *Predictors of academic procrastination in college students*. (Unpublished doctoral dissertation), Fordham University, Dissertation

Abstracts International, Section B: The Sciences and Engineering, 65(3-B).

- Ferrari, J. R. (1991a). Compulsive procrastination: Some self-reported characteristics. *Psychological Reports*, 68(2), 455-458.
- Ferrari, J. R. (1991b). A preference for a favorable public impression by procrastinators: Selecting among cognitive and social tasks. *Personality and Individual Differences*, 12(11), 1233-1237.
- Ferrari, J. R. (1991c). Self-handicapping by procrastinators: Protecting self-esteem, social-esteem, or both? *Journal of Research in Personality*, 25(3), 245-261.
- Ferrari, J. R. (1992). Procrastinators and perfect behavior: An exploratory factor analysis of self-presentation, self-awareness, and self-handicapping components. *Journal of Research in Personality*, 26(1), 75-84.
- Ferrari, J. R. (1993). Procrastination and impulsiveness: Two sides of a coin? In W. G. McCown, J. L. Johnson, & S. M. B (Eds.), *The impulsive client: Theory, research, and treatment* (pp. 265-276). Washington, DC, US: American Psychological Association.
- Ferrari, J. R. (1994). Dysfunctional procrastination and its relationship with self-esteem, interpersonal dependency, and self-defeating behaviors. *Personality and Individual Differences*, 17(5), 673-679.
- Ferrari, J. R. (2001). Procrastination as self-regulation failure of performance: effects of cognitive load, self-awareness, and time limits on 'working best under pressure'. *European Journal of Personality*, 15(5), 391-406.
- Ferrari, J. R. (2010). *Still procrastinating: The no regrets guide to getting it done*. New Jersey: John Wiley & Sons.
- Ferrari, J. R. (2011). Chronic procrastination: Life beyond ineffective time management. *Time Management*, 83-91.
- Ferrari, J. R., Barnes, K. L., & Steel, P. (2009). Life regrets by avoidant and arousal procrastinators: Why put off today what you will regret tomorrow? *Journal of Individual Differences*, 30(3), 163-168.

- Ferrari, J. R., Díaz-Morales, J. F., O'Callaghan, J., Díaz, K., & Argumedo, D. (2007). Frequent behavioral delay tendencies by adults: International prevalence rates of chronic procrastination. *Journal of Cross-Cultural Psychology, 38*(4), 458-464.
- Ferrari, J. R., Johnson, J. L., & McCown, W. G. (1995). *Procrastination and Task Avoidance: Theory, Research, and Treatment*. US: Springer.
- Ferrari, J. R., & Olivette, M. J. (1993). Perceptions of parental control and the development of indecision among late adolescent females. *Adolescence, 28*(112), 963.
- Ferrari, J. R., & Olivette, M. J. (1994). Parental authority and the development of female dysfunctional procrastination. *Journal of Research in Personality, 28*(1), 87-100.
- Ferrari, J. R., & Pychyl, T. A. (2012). "If I Wait, My Partner Will Do It:" The Role of Conscientiousness as a Mediator in the Relation of Academic Procrastination and Perceived Social Loafing. *North American Journal of Psychology, 14*(1).
- Ferrari, J. R., & Tice, D. M. (2000). Procrastination as a self-handicap for men and women: A task-avoidance strategy in a laboratory setting. *Journal of Research in Personality, 34*(1), 73-83.
- Field, A. P. (2009). *Discovering Statistics Using SPSS: (and Sex and Drugs and Rock 'n' Roll)*. London: SAGE.
- Fitzsimons, G. M., & Bargh, J. A. (2004). Automatic self-regulation. In *Handbook of self-regulation: Research, theory, and applications*. (pp. 151-170). New York, NY, US: Guilford Press.
- Flett, G. L., Blankstein, K. R., Hewitt, P. L., & Koledin, S. (1992). Components of perfectionism and procrastination in college students. *Social Behavior and Personality: An International Journal, 20*(2), 85-94.
- Flett, G. L., Blankstein, K. R., & Martin, T. R. (1995). Procrastination, negative self-evaluation, and stress in depression and anxiety. In *Procrastination and task avoidance* (pp. 137-167). US: Springer.

- Freud, S. (1953). *Inhibitions, symptoms and anxiety in collected works*. London: Hogards.
- Gagné, M. (2003). The role of autonomy support and autonomy orientation in prosocial behavior engagement. *Motivation and Emotion, 27*(3), 199-223.
- Gagné, M., Forest, J., Vansteenkiste, M., Crevier-Braud, L., Van den Broeck, A., Aspeli, A. K., . . . Güntert, S. T. (2015). The multidimensional work motivation scale: Validation evidence in seven languages and nine countries. *European Journal of Work and Organizational Psychology, 24*(2), 178-196.
- Ge, D., Sun, L., Zhou, C., Qian, Y., Zhang, L., & Medina, A. (2017). Exploring the risk factors of suicidal ideation among the seniors in Shandong, China: A path analysis. *Journal of Affective Disorders, 207*, 393-397.
- Gilbert, P., & Procter, S. (2006). Compassionate mind training for people with high shame and self- criticism: Overview and pilot study of a group therapy approach. *Clinical Psychology & Psychotherapy, 13*(6), 353-379.
- Gotlib, I. H., Lewinsohn, P. M., & Seeley, J. R. (1995). Symptoms versus a diagnosis of depression: Differences in psychosocial functioning. *Journal of Consulting and Clinical Psychology, 63*(1), 90-100.
- Haghbin, M., McCaffrey, A., & Pychyl, T. A. (2012). The complexity of the relation between fear of failure and procrastination. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 30*(4), 249-263.
- Hammen, C., & Watkins, E. (2013). *Depression*. Hoboken: Taylor & Francis.
- Hanfstingl, B., Andreitz, I., Müller, F. H., & Thomas, A. (2010). Are self-regulation and self-control mediators between psychological basic needs and intrinsic teacher motivation? *Journal for Educational Research Online, 2*(2), 55.
- Harrington, N. (2005). It's too difficult! Frustration intolerance beliefs and procrastination. *Personality and Individual Differences, 39*(5), 873-883.

- Haukoos, J. S., & Lewis, R. J. (2005). Advanced statistics: bootstrapping confidence intervals for statistics with “difficult” distributions. *Academic Emergency Medicine, 12*(4), 360-365.
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs, 76*(4), 408-420.
- Hazan, C., & Shaver, P. R. (1990). Love and work: An attachment-theoretical perspective. *Journal of Personality and Social Psychology, 59*(2), 270.
- Hodgins, H. S., & Knee, C. R. (2002). The integrating self and conscious experience. *Handbook of Self-Determination Research, 87-100*.
- Hollywood, L. E., Cuskelly, G. J., O'Brien, M., McConnon, A., Barnett, J., Raats, M. M., & Dean, M. (2013). Healthful grocery shopping. Perceptions and barriers. *Appetite, 70*, 119-126.
- Howell, A. J., & Watson, D. C. (2007). Procrastination: Associations with achievement goal orientation and learning strategies. *Personality and Individual Differences, 43*(1), 167-178.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55.
- Ilardi, B. C., Leone, D., Kasser, T., & Ryan, R. M. (1993). Employee and supervisor ratings of motivation: Main effects and discrepancies associated with job satisfaction and adjustment in a factory setting. *Journal of Applied Social Psychology, 23*(21), 1789-1805.
- Ingram, K. L., Cope, J. G., Harju, B. L., & Wuensch, K. L. (2000). Applying to graduate school: A test of the theory of planned behavior. *Journal of Social Behavior and Personality, 15*(2), 215.
- Jaccard, J., & Wan, C. K. (1996). *LISREL approaches to interaction effects in multiple regression*. Thousand Oaks, CA: Sage.
- Janis, I. L., & Mann, L. (1979). *Decision Making: A Psychological Analysis of Conflict, Choice, and Commitment*. New York: Free Press.

- Jaremko, M., & Meichenbaum, D. (2013). *Stress Reduction and Prevention*. New York: Springer US.
- Johnston, M. M., & Finney, S. J. (2010). Measuring basic needs satisfaction: Evaluating previous research and conducting new psychometric evaluations of the Basic Needs Satisfaction in General Scale. *Contemporary Educational Psychology, 35*(4), 280-296.
- Jöreskog, K. G., & Sörbom, D. (1993). *LISREL 8: Structural Equation Modeling with the SIMPLIS Command Language*. Chicago, IL: Scientific Software International.
- Judge, T. A., & Bono, J. E. (2001). Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology, 86*(1), 80.
- Katz, I., Eilat, K., & Nevo, N. (2014). “I’ll do it later”: Type of motivation, self-efficacy and homework procrastination. *Motivation and Emotion, 38*(1), 111-119.
- Kelloway, E. K. (1998). *Using LISREL for structural equation modeling: A researcher's guide*. Thousand Oaks, CA: Sage.
- Kennedy, E., Ohls, J., Carlson, S., & Fleming, K. (1995). The healthy eating index: design and applications. *Journal of the Academy of Nutrition and Dietetics, 95*(10), 1103-1108.
- Kernis, M. H. (2003). Toward a conceptualization of optimal self-esteem. *Psychological Inquiry, 14*(1), 1-26.
doi:10.1207/S15327965PLI1401_01
- Khalil, G. E., Wang, H., Calabro, K. S., Mitra, N., Shegog, R., & Prokhorov, A. V. (2017). From the Experience of Interactivity and Entertainment to Lower Intention to Smoke: A Randomized Controlled Trial and Path Analysis of a Web-Based Smoking Prevention Program for Adolescents. *Journal of Medical Internet Research, 19*(2).
- Klassen, R. M., Ang, R. P., Chong, W. H., Krawchuk, L. L., Huan, V. S., Wong, I. Y., & Yeo, L. S. (2010). Academic procrastination in two settings: Motivation correlates, behavioral patterns, and negative impact

of procrastination in Canada and Singapore. *Applied Psychology*, 59(3), 361-379.

Klassen, R. M., Krawchuk, L. L., & Rajani, S. (2008). Academic procrastination of undergraduates: Low self-efficacy to self-regulate predicts higher levels of procrastination. *Contemporary Educational Psychology*, 33(4), 915-931.

Klem, L. (1995). *Path analysis*. Washington, DC: American Psychological Association.

Kline, R. B. (2015). *Principles and Practice of Structural Equation Modeling, Fourth Edition*: Guilford Publications.

Klingsieck, K. B. (2013). Procrastination. *European Psychologist*, 18(1), 24-34. doi:10.1027/1016-9040/a000138

Knaus, W. J. (1998). *Do it now!: Break the procrastination habit*. New York: J. Wiley.

Kutlesa, N. (1999). *Effects of group counseling with university students who complain of procrastination*. University of Ontario, Canada.

L'Abate, L., & Bryson, C. H. (1994). *A Theory of Personality Development*. Chichester: Wiley.

Lay, C. (1986). At last, my research article on procrastination. *Journal of Research in Personality*, 20(4), 474-495.

Lay, C. (1987). A modal profile analysis of procrastinators: A search for types. *Personality and Individual Differences*, 8(5), 705-714.

Lay, C. (1988). The relationship of procrastination and optimism to judgments of time to complete an essay and anticipation of setbacks. *Journal of Social Behavior and Personality*, 3(3), 201.

Lay, C. (1992). Trait procrastination and the perception of person-task characteristics. *Journal of Social Behavior and Personality*, 7, 483-494.

Lay, C., Kovacs, A., & Danto, D. (1998). The relation of trait procrastination to the big-five factor conscientiousness: an assessment with primary-

- junior school children based on self-report scales. *Personality and Individual Differences*, 25(2), 187-193.
- Lay, C., & Silverman, S. (1996). Trait procrastination, anxiety, and dilatory behavior. *Personality and Individual Differences*, 21(1), 61-67.
- Lee, D., Kelly, K. R., & Edwards, J. K. (2006). A closer look at the relationships among trait procrastination, neuroticism, and conscientiousness. *Personality and Individual Differences*, 40(1), 27-37. doi:<http://dx.doi.org/10.1016/j.paid.2005.05.010>
- Lee, E. (2005). The relationship of motivation and flow experience to academic procrastination in university students. *The Journal of Genetic Psychology*, 166(1), 5-15.
- Lewis, M. (1990). Self-knowledge and social development in early life. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (pp. 277-300). New York: Guilford Press.
- Loehlin, J. C., & Beaujean, A. A. (2016). *Latent Variable Models: An Introduction to Factor, Path, and Structural Equation Analysis, Fifth Edition*. New York: Taylor & Francis.
- Loevinger, J. (1976). *Ego development: Conceptions and theories*. Chichester: Jossey-Bass.
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335-343.
- Marsh, H. W., & Parker, J. W. (1984). Determinants of student self-concept: Is it better to be a relatively large fish in a small pond even if you don't learn to swim as well? *Journal of Personality and Social Psychology*, 47(1), 213.
- Maruyama, G. (1997). *Basics of Structural Equation Modeling*: SAGE Publications.

- Maruyama, G. (1998). *Basics of Structural Equation Modeling*. In. Retrieved from <http://sk.sagepub.com/books/basics-of-structural-equation-modelling> doi:10.4135/9781483345109
- McCown, W., Johnson, J., & Petzel, T. (1989). Procrastination, a principal components analysis. *Personality and Individual Differences, 10*(2), 197-202.
- McWhirter, B. T., Burrow-Sanchez, J. J., & Townsend, K. C. (2008). Measuring learned resourcefulness in college students: Factor structure of the Self-Control Schedule (SCS). *College Student Journal, 42*(4), 1099-1110.
- Menard, S. (2002). *Applied Logistic Regression Analysis*. Thousand Oaks, CA: SAGE Publications.
- Metcalf, J., & Mischel, W. (1999). A hot/cool-system analysis of delay of gratification: dynamics of willpower. *Psychological Review, 106*(1), 3.
- Milgram, N. (1991). Procrastination. *Encyclopedia of Human Biology, 6*, 149-155.
- Milgram, N., Sroloff, B., & Rosenbaum, M. (1988). The procrastination of everyday life. *Journal of Research in Personality, 22*(2), 197-212.
- Moller, A. C., Deci, E. L., & Ryan, R. M. (2006). Choice and ego-depletion: The moderating role of autonomy. *Personality and Social Psychology Bulletin, 32*(8), 1024-1036.
- Mullen, S. P., Gothe, N. P., & McAuley, E. (2013). Evaluation of the factor structure of the Rosenberg Self-Esteem Scale in older adults. *Personality and Individual Differences, 54*(2), 153-157.
- Munro, B. H. (2005). *Statistical Methods for Health Care Research*. Philadelphia: Lippincott Williams & Wilkins.
- Nieroba, M. E. A. H. S., & Rist, F. (2011). Restriction of working time as a method in the treatment of procrastination. *Verhaltenstherapie, 21*, 255-261.

- Nieuwenhuijsen, K., de Boer, A. G. E. M., Verbeek, J., Blonk, R., & van Dijk, F. J. H. (2003). The Depression Anxiety Stress Scales (DASS): detecting anxiety disorder and depression in employees absent from work because of mental health problems. *Occupational and Environmental Medicine*, 60(Suppl 1), i77-i82. doi:10.1136/oem.60.suppl_1.i77
- Nishimura, T., & Suzuki, T. (2016). Basic psychological need satisfaction and frustration in Japan: controlling for the big five personality traits. *Japanese Psychological Research*, 58(4), 320-331.
- Nordby, K., Wang, C. E. A., Dahl, T. I., & Svartdal, F. (2016). Intervention to reduce procrastination in first-year students: Preliminary results from a Norwegian study. *Scandinavian Psychologist*, 3.
- Norman, G. R., & Streiner, D. L. (2003). *PDQ Statistics*. Hamilton, Ont: B.C. Decker.
- Orkibi, H., & Ronen, T. (2017). Basic Psychological Needs Satisfaction Mediates the Association between Self-Control Skills and Subjective Well-Being. *Frontiers in Psychology*, 8, 936.
- Orth, U., Robins, R. W., Widaman, K. F., & Conger, R. D. (2014). Is low self-esteem a risk factor for depression? Findings from a longitudinal study of Mexican-origin youth. *Developmental Psychology*, 50(2), 622.
- Peterson, C., Colvin, D., & Lin, E. H. (1992). Explanatory style and helplessness. *Social Behavior and Personality: An International Journal*, 20(1), 1-13.
- Poropat, A. E. (2009). A meta-analysis of the five-factor model of personality and academic performance. *Psychological Bulletin*, 135(2), 322.
- Price, J. (1967). The dominance hierarchy and the evolution of mental illness. *The Lancet*, 290(7509), 243-246. doi:10.1016/S0140-6736(67)92306-9
- Pychyl, T. A. (2009). Active procrastination: Thoughts on oxymorons. Retrieved June 15, 2017, from: <http://www.psychologytoday.com/blog/dont-delay/200907/active-procrastination-thoughts-oxymorons>.

- Pychyl, T. A., Coplan, R. J., & Reid, P. A. (2002). Parenting and procrastination: gender differences in the relations between procrastination, parenting style and self-worth in early adolescence. *Personality and Individual Differences, 33*(2), 271-285.
- Pychyl, T. A., & Flett, G. L. (2012). Procrastination and self-regulatory failure: An introduction to the special issue. *Rational-Emotive & Cognitive-Behavior Therapy, 30*(4), 203-212.
- Pychyl, T. A., & Little, B. R. (1998). Dimensional specificity in the prediction of subjective well-being: Personal projects in pursuit of the PhD. *Social Indicators Research, 45*(1), 423-473.
- Raeburn, J. (2001). Towards healthy gambling: A health promotion approach to gambling in New Zealand. In *Gambling, harm and health: Two perspectives on ways to minimise harm and maximise health with regard to gambling In New Zealand*. Auckland, New Zealand: Problem Gambling Committee/Gambling Studies Institute.
- Rhodewalt, F., & Tragakis, M. W. (2003). Self-Esteem and Self-Regulation: Toward Optimal Studies of Self-Esteem. *Psychological Inquiry, 14*(1), 66-70.
- Richards, P. S. (1985). Construct validation of the self-control schedule. *Journal of Research in Personality, 19*(2), 208-218.
- Rogers, C. R. (1957). *On becoming a person*. London: Houghton Mifflin Boston.
- Rogers, C. R. (1959). *A theory of therapy, personality, and interpersonal relationships: As developed in the client-centered framework* (Vol. 3). New York: McGraw-Hill.
- Rosenbaum, M. (1980). A schedule for assessing self-control behaviors: Preliminary findings. *Behavior Therapy, 11*(1), 109-121.
- Rosenbaum, M. (1990). The role of learned resourcefulness in the self-control of health behavior. In M. Rosenbaum (Ed.), *Learned resourcefulness: On coping skills, self-control, and adaptive behavior* (Vol. 24, pp. 3-30). New York, NY, US: Springer Publishing Co.

- Rosenbaum, M., & Ben-Ari Smira, K. (1986). Cognitive and personality factors in the delay of gratification of hemodialysis patients. *Journal of Personality and Social Psychology*, 51(2), 357.
- Rosenbaum, M., & Jaffe, Y. (1983). Learned helplessness: The role of individual differences in learned resourcefulness. *British Journal of Social Psychology*, 22(3), 215-225.
- Rosenberg, M. (1965). *Society and the Adolescent Self-image*. Princeton, New Jersey: Princeton University Press.
- Rothblum, E. D., Solomon, L. J., & Murakami, J. (1986). Affective, cognitive, and behavioral differences between high and low procrastinators. *Journal of Counseling Psychology*, 33(4), 387.
- Ryan, R. M. (1993). Agency and organization: Intrinsic motivation, autonomy, and the self in psychological development. In J. E. Jacobs (Ed.), *Current theory and research in motivation* (Vol. 40, pp. 1-56). Lincoln, NE, US: University of Nebraska Press.
- Ryan, R. M., & Brown, K. W. (2003). Why we don't need self-esteem: On fundamental needs, contingent love, and mindfulness. *Psychological Inquiry*, 14(1), 71-76.
- Ryan, R. M., & Deci, E. L. (2000a). The darker and brighter sides of human existence: Basic psychological needs as a unifying concept. *Psychological Inquiry*, 11(4), 319-338.
- Ryan, R. M., & Deci, E. L. (2000b). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68.
- Ryan, R. M., & La Guardia, J. G. (2000). What is being optimized?: Self-determination theory and basic psychological needs. In S. H. Qualls, N. Abeles, S. H. Qualls, & N. Abeles (Eds.), *Psychology and the aging revolution: How we adapt to longer life*. (pp. 145-172). Washington, DC, US: American Psychological Association.
- Saddler, C. D., & Sacks, L. A. (1993). Multidimensional perfectionism and academic procrastination: Relationships with depression in university students. *Psychological Reports*, 73(3, Pt 1), 863-871. doi:10.2466/pr0.1993.73.3.863

- Schouwenburg, H. C. (1992). Procrastinators and fear of failure: An exploration of reasons for procrastination. *European Journal of Personality*, 6(3), 225-236.
- Schouwenburg, H. C., & Lay, C. H. (1995). Trait procrastination and the big-five factors of personality. *Personality and Individual Differences*, 18(4), 481-490.
- Schouwenburg, H. C., Lay, C. H., Pychyl, T. A., & Ferrari, J. R. (2004). *Counseling the procrastinator in academic settings*. Washington, DC: American Psychological Association.
- Schraw, G., Wadkins, T., & Olafson, L. (2007). Doing the things we do: A grounded theory of academic procrastination. *Journal of Educational Psychology*, 99(1), 12.
- Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling*. Mahwah, NJ: Psychology Press.
- Senécal, C., Julien, E., & Guay, F. (2003). Role conflict and academic procrastination: A self-determination perspective. *European Journal of Social Psychology*, 33(1), 135-145.
- Senécal, C., Koestner, R., & Vallerand, R. J. (1995). Self-regulation and academic procrastination. *The Journal of Social Psychology*, 135(5), 607-619.
- Seo, E. H. (2011). The relationships among procrastination, flow, and academic achievement. *Social Behavior and Personality: An International Journal*, 39(2), 209-217.
- Shahani, C., Dipboye, R. L., & Phillips, A. P. (1990). Global self-esteem as a correlate of work-related attitudes: A question of dimensionality. *Journal of Personality Assessment*, 54(1-2), 276-288.
- Shahar, G., & Davidson, L. (2003). Depressive symptoms erode self-esteem in severe mental illness: A three-wave, cross-lagged study. *Journal of Consulting and Clinical Psychology*, 71(5), 890.

- Shams, S. (2017). *University Counsellors' experiences of working with students who procrastinate: an Interpretative Phenomenological Analysis*. University of Roehampton,
- Sheldon, K. M., Ryan, R., & Reis, H. T. (1996). What makes for a good day? Competence and autonomy in the day and in the person. *Personality and Social Psychology Bulletin*, 22(12), 1270-1279.
- Shorkey, C. T., & Whiteman, V. L. (1978). Correlations between standard English and dialectical Spanish versions of five personality scales. *Psychological Reports*, 43.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: new procedures and recommendations. *Psychological Methods*, 7(4), 422.
- Sigall, H., Kruglanski, A., & Fyock, J. (2000). Wishful thinking and procrastination. *Journal of Social Behavior and Personality*, 15(5), 283.
- Silber, E., & Tippett, J. S. (1965). Self-esteem: Clinical assessment and measurement validation. *Psychological Reports*, 16(3), 1017-1071.
- Silver, M., & Sabini, J. (1981). Procrastinating. *Journal for the Theory of Social Behaviour*, 11(2), 207-221.
- Sirois, F. (2007). "I'll look after my health, later": A replication and extension of the procrastination–health model with community-dwelling adults. *Personality and Individual Differences*, 43(1), 15-26.
- Sirois, F., Melia-Gordon, M. L., & Pychyl, T. A. (2003). "I'll look after my health, later": An investigation of procrastination and health. *Personality and Individual Differences*, 35(5), 1167-1184.
- Sirois, F., & Pychyl, T. (2013). Procrastination and the priority of short- term mood regulation: Consequences for future self. *Social and Personality Psychology Compass*, 7(2), 115-127.
- Siva, A. (1991). Infertilitede stresle başetme, öğrenilmiş güçlülük ve depresyonun incelenmesi [The examination of coping with stress, learned resourcefulness, and depression in infertility]. *Unpublished*

doctoral dissertation, Hacettepe University, Ankara, Institute of Neurological Sciences and Psychiatry.

Sobin, C., & Sackeim, H. A. (1997). Psychomotor symptoms of depression. *The American Journal of Psychiatry*, *154*(1), 4.

Solomon, L. J., & Rothblum, E. D. (1984). Academic procrastination: Frequency and cognitive-behavioral correlates. *Journal of Counseling Psychology*, *31*(4), 503.

Spielberger, C. D. (1972). Conceptual and methodological issues in anxiety research. *Anxiety: Current Trends in Theory and Research*, *2*, 481-493.

Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. *Psychological Bulletin*, *133*(1), 65-94. doi:10.1037/0033-2909.133.1.65

Steel, P., & König, C. J. (2006). Integrating theories of motivation. *Academy of Management Review*, *31*(4), 889-913.

Stöber, J., & Joormann, J. (2001). Worry, procrastination, and perfectionism: Differentiating amount of worry, pathological worry, anxiety, and depression. *Cognitive Therapy and Research*, *25*(1), 49-60.

Strauman, T. J. (2002). Self-Regulation and Depression. *Self and Identity*, *1*(2), 151-157. doi:10.1080/152988602317319339

Subotnik, R., Steiner, C., & Chakraborty, B. (1999). Procrastination revisited: The constructive use of delayed response. *Creativity Research Journal*, *12*(2), 151-160.

Şimşek, Ö. F., & Yalınçetin, B. (2010). I feel unique, therefore I am: The development and preliminary validation of the personal sense of uniqueness (PSU) scale. *Personality and Individual Differences*, *49*(6), 576-581. doi:<https://doi.org/10.1016/j.paid.2010.05.006>

Tabachnick, B. G., & Fidell, L. S. (2013). *Using Multivariate Statistics*. Boston: Pearson Education.

Thomas, J. R. (2008). More than a pretty face: The Mona Lisa. *Archives of Facial Plastic Surgery*, *10*(1), 65-66.

- Tibbett, T. P., & Ferrari, J. R. (2015). The portrait of the procrastinator: Risk factors and results of an indecisive personality. *Personality and Individual Differences, 82*, 175-184.
- Tice, D. M. (1991). Esteem protection or enhancement? Self-handicapping motives and attributions differ by trait self-esteem. *Journal of Personality and Social Psychology, 60*(5), 711.
- Tice, D. M., & Baumeister, R. F. (1997). Longitudinal study of procrastination, performance, stress, and health: The costs and benefits of dawdling. *Psychological Science, 8*(6), 454-458.
- Torrance, E. P., & Safter, H. T. (1990). *The incubation model of teaching: Getting beyond the aha!* Buffalo, NY: Bearly Limited.
- Tuckman, B. (1991). The development and concurrent validity of the procrastination scale. *Educational And Psychological Measurement, 51*(2), 473-480.
- Ulukaya, S., & Bilge, F. (2014). Üniversite Öğrencilerinde Akademik Ertelemenin Yordayıcıları Olarak Aile Bağlamında Benlik ve Ana-Baba Tutumları. *Türk Psikolojik Danışma ve Rehberlik Dergisi, 5*(41), 89-102.
- Uzun Özer, B. (2005). Academic procrastination: Prevalence, self-reported reasons, gender difference and it's relation with academic achievement. *Unpublished master's thesis, Middle East Technical University, Social Science Institute, Ankara.*
- Uzun Özer, B. (2010). A path analytic model of procrastination: Testing cognitive, affective and behavioral components. *Unpublished doctoral dissertation, Institute of Education Sciences, METU, Ankara.*
- Uzun Özer, B., Demir, A., & Ferrari, J. R. (2013). Reducing academic procrastination through a group treatment program: A pilot study. *Journal of Rational-Emotive & Cognitive-Behavior Therapy, 31*(3), 127-135.
- Uzun Özer, B., O'Callaghan, J., Bokszczanin, A., Ederer, E., & Essau, C. (2014). Dynamic interplay of depression, perfectionism and self-regulation on procrastination. *British Journal of Guidance & Counselling, 42*(3), 309-319.

- Uzun Özer, B., Saçkes, M., & Tuckman, B. W. (2013). Psychometric properties of the Tuckman Procrastination Scale in a Turkish sample. *Psychological Reports, 113*(3), 874-884.
- van Eerde, W. (2003). A meta-analytically derived nomological network of procrastination. *Personality and Individual Differences, 35*(6), 1401-1418. doi:[http://dx.doi.org/10.1016/S0191-8869\(02\)00358-6](http://dx.doi.org/10.1016/S0191-8869(02)00358-6)
- Vancouver, J. B., Weinhardt, J. M., & Schmidt, A. M. (2010). A formal, computational theory of multiple-goal pursuit: Integrating goal-choice and goal-striving processes. *Journal of Applied Psychology, 95*(6), 985.
- Vodanovich, S. J., & Rupp, D. E. (1999). Are procrastinators prone to boredom? *Social Behavior and Personality, 27*(1), 11.
- Wang, J.-Y., Chu, J., Sun, S.-H., Zhang, J., Guo, X.-L., & Jia, C.-X. (2017). Social psychological factors and suicidal intent among suicide attempters in rural China: a path analysis. *The Journal of Nervous and Mental Disease, 205*(1), 48-53.
- Watson, D. C. (2001). Procrastination and the five-factor model: A facet level analysis. *Personality and Individual Differences, 30*(1), 149-158.
- Wei, M., Shaffer, P. A., Young, S. K., & Zakalik, R. A. (2005). Adult attachment, shame, depression, and loneliness: The mediation role of basic psychological needs satisfaction. *Journal of Counseling Psychology, 52*(4), 591.
- White, R. W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review, 66*(5), 297.
- Willett, W. C., Sacks, F., Trichopoulou, A., Drescher, G., Ferro-Luzzi, A., Helsing, E., & Trichopoulos, D. (1995). Mediterranean diet pyramid: a cultural model for healthy eating. *The American Journal of Clinical Nutrition, 61*(6), 1402S-1406S.
- Wolters, C. A. (2003). Understanding procrastination from a self-regulated learning perspective. *Journal of Educational Psychology, 95*(1), 179.
- Wright, S. (1934). The method of path coefficients. *The Annals of Mathematical Statistics, 5*(3), 161-215.

Yılmaz, M., Gürçay, D., & Ekici, G. (2007). Akademik özyeterlik ölçeğinin Türkçe'ye uyarlanması. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 33, 253-259.

Yontef, G. M. (1993). *Awareness, dialogue & process: essays on Gestalt therapy*. Highland, NY: The Gestalt Journal Press.

APPENDICES

A. APPROVAL LETTER FROM METU HUMAN SUBJECTS ETHICS COMMITTEE

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER



DUMLUPINAR BULVARI 06800
ÇANKAYA ANKARA/TURKEY
T: +90 312 210 22 91
F: +90 312 210 79 59
ueam@metu.edu.tr
www.ueam.metu.edu.tr

Sayı: 28620816/2463

05 ARALIK 2016

Konu: Değerlendirme Sonucu

Gönderilen: Prof. Dr. Oya YERİN GÜNERİ

Eğitim Fakültesi

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof. Dr. Oya YERİN GÜNERİ;

Danışmanlığınızı yaptığınız doktora öğrencisi Sevgi SERHATOĞLU' nun "Üniversite Öğrencilerinde Ertelemenin Yordayıcıları: Bir Öz-Belirleme Modelinin İncelenmesi" başlıklı araştırması İnsan Araştırmaları Kurulu tarafından uygun görülerek gerekli onay 2016-EGT-167 protokol numarası ile 12.12.2016-15.06.2017 tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Canan SÜMER

İnsan Araştırmaları Etik Kurulu Başkanı

Prof. Dr. Mehmet UTKU

İAEK Üyesi

Prof. Dr. Ayhan Gürbüz DEMİR

İAEK Üyesi

Yrd. Doç. Dr. Pınar KAYGAN

İAEK Üyesi

Prof. Dr. Ayhan SOL

İAEK Üyesi

Doç. Dr. Vasar KONDAKÇI

İAEK Üyesi

Yrd. Doç. Dr. Emre SELÇUK

İAEK Üyesi

B. INFORMED CONCENT FORM

Gönüllü Katılım Formu

Sevgili Öğrenciler,

Üniversite öğrencilerinin akademik erteleme eğilimlerini anlamaya yönelik olarak yürütülen bu çalışmada sizden istenilen, verilen yönergeleri dikkatle okuyarak soruları yanıtlamanızdır.

Sorulara vereceğiniz tüm yanıtlar gizli tutulacak ve bu çalışmadan elde edilen veriler kimlik bilgileri olmaksızın değerlendirilecektir. Bu nedenle ölçeğin üzerine kimliğinizi belirleyecek bilgiler yazmanıza gerek yoktur. Çalışma için ayıracağınız zaman ve bilimsel bilgi birikimine yapacağınız katkılarınız için teşekkür ederim.

Arş. Gör. Sevgi Serhatoğlu

Eğitim Fakültesi, Eğitim Bilimleri Bölümü

e-mail: sevgi.ulukaya@tedu.edu.tr

Gönüllü olarak araştırmaya katılmayı kabul ediyor musunuz?

Evet () Hayır ()

C. DEMOGRAPHIC INFORMATION FORM

Demografik Bilgi Toplama Formu

Cinsiyetiniz : K () E ()

Yaşınız :

Bölümünüz :

Sınıfınız : 1. Sınıf () 2. Sınıf () 3. Sınıf () 4. Sınıf ()

Genel Akademik Ortalamanız:

D. SAMPLE ITEMS FROM TUCKMAN PROCRASTINATION SCALE

Tuckman Akademik Erteleme Ölçeği

Bu ölçek, aşağıda belirtilen ifadelerin sizi ne kadar tanımladığını belirtmeniz için hazırlanmıştır. Lütfen, Her bir ifadeyi okuduktan sonra, ifadelerin sizi ne kadar tanımladığını karşısındaki kutucuğu işaretleyerek belirtiniz. Lüften cevaplarınızda mümkün olduğu kadar dürüst ve içten olunuz.

	Kesinlikle Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Kesinlikle Katılıyorum
1. Önemli olsalar bile, işleri bitirmeyi gereksizce ertelerim.	①	②	③	④	⑤
2. Yapmaktan hoşlanmadığım şeylere başlamayı ertelerim.	①	②	③	④	⑤
3. İşlerin teslim edilmesi gereken bir tarih olduğunda, son dakikaya kadar beklerim.	①	②	③	④	⑤
5. Bir şeyi yapmamak için bahane bulmayı başarırım.	①	②	③	④	⑤
6. Ben iflah olmaz bir zaman savurganıyım.	①	②	③	④	⑤
8. Ben bir zaman savurganıyım ve bunu düzeltmek için hiç bir çaba gösteremiyorum.	①	②	③	④	⑤
10. Bir eylem planı yaptığımda, onu takip ederim.	①	②	③	④	⑤
13. Bir işe başlamanın ne kadar önemli olduğunu bilsem de başlayamadan tıkanır kalırım.	①	②	③	④	⑤
14. Bugünün işini yarına bırakmak benim tarzım değildir.	①	②	③	④	⑤

E. SAMPLE ITEMS FROM BASIC PSYCHOLOGICAL NEED SCALE

Temel Psikolojik İhtiyaçlar Ölçeği

Lütfen aşağıdaki her bir ifadenin sizi ne ölçüde tanımladığını aşağıdaki ölçeklemeyi dikkate alarak değerlendiriniz.

	Bana Hiç Uygun Değil	Bana Çok Az Uygun	Bana Uygun	Bana Oldukça Uygun	Bana Tamamen Uygun
1. Kendi hayatımı nasıl yaşayacağıma karar vermede kendimi özgür hissedirim.	①	②	③	④	⑤
2. Etkileşim içerisine girdiğim insanları gerçekten severim.	①	②	③	④	⑤
9. Bugünlerde, ilgimi çeken yeni şeyleri öğrenebiliyorum.	①	②	③	④	⑤
10. Düzenli olarak etkileşim içinde olduğum insanları arkadaşım olarak kabul ederim.	①	②	③	④	⑤
11. Günlük yaşamımda sıklıkla bana söylenen şeyleri yapmak zorunda hissedirim.	①	②	③	④	⑤
12. Yaşamımdaki insanlar bana özen gösterirler.	①	②	③	④	⑤
13. Çoğu zaman yaptığım şeylerden kaynaklanan bir başarı hissi yaşarım.	①	②	③	④	⑤
14. Etkileşim içerisinde olduğum insanlar duygularımı dikkate alırlar.	①	②	③	④	⑤
19. Sıklıkla kendimi yetersiz hissediyorum.	①	②	③	④	⑤
21. İnsanlar genelde bana karşı cana yakın davranırlar.	①	②	③	④	⑤

**F. SAMPLE ITEMS FROM DEPRESSION ANXIETY AND STRESS
SCALE**

Depresyon Kaygı ve Stres Ölçeği

Depresyon Alt Boyutu

Lütfen son bir hafta içinde aşağıdaki her bir ifadenin sizi ne ölçüde tanımladığını belirtiniz.

SON 1 HAFTADAKİ DURUMUNUZ	Hiçbir Zaman	Bazen ve Arasıra	Oldukça Sık	Her Zaman
1. Hiç olumlu duygu yaşayamadığımı fark ettim.	①	②	③	④
2. Hiçbir şey yapamaz oldum.	①	②	③	④
3. Hiçbir beklentimin olmadığı hissine kapıldım.	①	②	③	④
4. Kendimi üzgün ve depresif hissettim.	①	②	③	④
5. Neredeyse her şeye karşı olan ilgimi kaybettiğimi hissettim.	①	②	③	④
11. Oldukça değersiz olduğumu hissettim.	①	②	③	④
12. Gelecekte ümit veren bir şey göremedim.	①	②	③	④
13. Hayatın anlamsız olduğu hissine kapıldım.	①	②	③	④
14. Bir iş yapmak için gerekli olan ilk adımı atmada zorlandım.	①	②	③	④

G. SAMPLE ITEMS FROM ROSENBERG SELF-ESTEEM SCALE

Rosenberg Benlik Saygısı Ölçeği

Aşağıdaki her bir ifadenin sizi ne ölçüde tanımladığını aşağıdaki ölçeklemeyi dikkate alarak değerlendiriniz.

	Çok doğru	Doğru	Yanlış	Çok yanlış
1. Kendimi en az diğer insanlar kadar değerli buluyorum.	①	②	③	④
2. Bazı olumlu özelliklerim olduğunu düşünüyorum.	①	②	③	④
3. Genelde kendimi başarısız bir kişi olarak görme eğilimindeyim.	①	②	③	④
8. Kendime karşı daha fazla saygı duyabilmeyi isterdim.	①	②	③	④
9. Bazen kendimin kesinlikle bir işe yaramadığını düşünüyorum.	①	②	③	④
10. Bazen kendimin hiç de yeterli bir insan olmadığını düşünüyorum.	①	②	③	④

H. SAMPLE ITEMS FROM SELF-CONTROL SCHEDULE

Öz-Kontrol Envanteri

Aşağıda kötü bir durum veya olayla karşılaşıldığında kişilerin neler yapabileceğini anlatan ifadeler vardır. Lütfen her maddeyi dikkatle okuyarak o maddede yer alan ifadenin size ne derece uygun olduğuna karar veriniz.

	Hiç tanımlamıyor	Biraz tanımlıyor	Oldukça iyi tanımlıyor	İyi tanımlıyor	Çok iyi tanımlıyor
1. Sıkıcı bir iş yaparken, işin en az sıkıcı olan yanını ve bitirdiğimde elde edeceğim kazancı düşünürüm.	①	②	③	④	⑤
2. Beni bunaltan bir iş yapmak zorunda olduğumda, bunaltımı nasıl yenebileceğimi hayal eder, düşünürüm.	①	②	③	④	⑤
11. Çalışmayı planladığımda, işimle ilgili olmayan herşeyi ortadan kaldırırım.	①	②	③	④	⑤
12. Kötü bir huyumdan vazgeçmek istediğimde, bu huyumu devam ettiren nedir diye araştırırım.	①	②	③	④	⑤
13. Beni sıkan bir düşünce karşısında güzel şeyler düşünmeye çalışırım.	①	②	③	④	⑤
15. Kendimi kötü hissettiğimde neşeli görünmeye çalışarak ruh halimi değiştiririm.	①	②	③	④	⑤
18. Hemen yapabilecek durumda bile olsam hoşlanmadığım işleri geciktiririm.	①	②	③	④	⑤
20. Oturup belli bir işi yapmam güç geldiğinde, başlayabilmek için değişik yollar ararım.	①	②	③	④	⑤

I. CURRICULUM VITAE

PERSONAL INFORMATION

Surname, Name: Serhatođlu, Sevgi
Nationality: Turkish (TC)
Date and Place of Birth: 23 September 1986, Afyon
Marital Status: Married
e-mail: ulukaya05@yahoo.com

EDUCATION

Degree	Institution	Year of Graduation
PhD	METU Psychological Counseling and Guidance	2018
MS	Hacettepe Uni. Psychological Counseling and Guidance	2012
BA	Yeditepe Uni. Psychological Counseling and Guidance	2010
High School	Afyon Teacher Training Anatolian High School	2005

WORK EXPERIENCE

Year	Place	Enrollment
2012-Present	TED University Department of Educational Sciences	Research Assistant

FOREIGN LANGUAGES

Advanced English, Intermediate Spanish, Intermediate German

PUBLICATIONS

Aracı-İyiaydın, A., Yılmaztürk, N. H., **Serhatođlu, S.**, & Çok, F. (2017). Social Networking Sites and Adolescence: A content analysis of published studies. *18th European Conference on Developmental Psychology, August 29-September 1, Utrecht, The Netherlands.*

Serhatođlu, S. (2017). Art and Gestalt Therapy. *Türk PDR Bulletin, 4(29).*

- Ulukaya, S.**, Aras, S., Çok, F., & Buldu, M. (2014). *Young Children's Perceptions of Youth*. 14th biennial Conference of The European Association for Research on Adolescence, İzmir, Turkey.
- Ulukaya, S.** ve Bilge, F. (2014). Üniversite Öğrencilerinde Akademik Ertelemenin Yordayıcıları Olarak Aile Bağlamında Benlik ve Ana-baba Tutumları. *Türk Psikolojik Danışma ve Rehberlik Dergisi*, 5(41), 89-102.
- Ulukaya, S.** ve Bilge, F. (2013). *Üniversite öğrencilerinde akademik erteleme, aile bağlamında benlik ve anababa tutumları*. XII. Ulusal Psikolojik Danışma ve Rehberlik Kongresi, Boğaziçi Üniversitesi, İstanbul.
- Ulukaya, S.** (2012). *Üniversite Öğrencilerinde Akademik Ertelemenin Yordayıcıları Olarak Aile Bağlamında Benlik ve Ana-baba Tutumları*. Yüksek Lisans Tezi, Hacettepe Üniversitesi, Ankara.
- Bugay, A., Tuna, M. E., Çelik Örucü, M. **Ulukaya, S.** ve Çok, F. (2012). *Yeni bir Rehberlik ve Psikolojik Danışma Programı: TED Üniversitesi örneği*. IV. Ulusal PDR Uygulamaları Kongresi, Ankara.
- Ulukaya, S.** ve Bilge, F. (2011). *Geşalt yaklaşımında yer alan kutuplar kavramı ve değerler eğitimi*. Değerler Eğitimi Sempozyumu'nda sunulan bildiri, Eskişehir Osmangazi Üniversitesi, Eskişehir.
- Bilge, F. ve **Ulukaya, S.** (2011). *Toplumsal cinsiyet eşitliği/eşitsizliği çerçevesinde Türkiye'de psikolojik danışmanların eğitimi*. XI. Ulusal Psikolojik Danışma ve Rehberlik Kongresi'nde sunulan bildiri, Ege Üniversitesi, İzmir.

HOBBIES

Trampoline, Dancing, Volleyball, Boxing, Skating, Needlecraft, Stitching, Sculpturing, Stained Glass, Tennis, Table Tennis, Music, Movies, Computer Games, Reading

J. TURKISH SUMMARY/TÜRKÇE ÖZET

ERTELEME: ÖZ-BELİRLEME KURAMINA DAYALI BİR MODELİN İNCELENMESİ

1. GİRİŞ

İnsanođlu doğası geređi birçok uğraşsa sahip olmaya eğilimlidir ve bu uğraşları çeşitli yollarla elde etmeye çalışır. Erteleme, insanların verimli ve üretken bir biçimde işlerini yerine getirmelerinde başarısız olmalarına neden olan bir durumdur. Büyük veya küçük sayısız görevle etkileşim kurmak için önemli olan becerilerdeki işlev bozukluđudur (Milgram, 1991).

Yaklaşık olarak genel nüfusun dörtte biri erteleme davranışı ile mücadele etmektedir (Ferrari, 1994; Ferrari, Díaz-Morales, O'Callaghan, Díaz, & Argumedo, 2007) ve bu eğilim artan stres ve kötü yaşam koşullarından (Tice & Baumeister, 1997) azalan akademik başarıya (Howell & Watson, 2007; Rothblum, Solomon, & Murakami, 1986) varan sonuçları ile üniversite öğrencileri arasında neredeyse evrenseldir. Öğrencilerin %70'i erteleme eğilimi göstermekte (Schouwenburg, Lay, Pychyl, & Ferrari, 2004) ve bunlardan %50'si sürekli ve sorun teşkil eder bir biçimde ertelemektedir (V. Day, Mensink, & O'Sullivan, 2000; Ulukaya & Bilge, 2014; Uzun Özer, 2005). Buna karşılık, akademik başarıda düşüş ertelemenin kesin bir sonucu değildir, öğrencilerin erteleme puanları ile ders notları arasında bir ilişki olmadığını gösteren birçok çalışma bulunmaktadır (Csikszentmihalyi, 1990; Ferrari, 1992; Schraw, Wadkins, & Olafson, 2007; Solomon & Rothblum, 1984).

Son 40 yılda, erteleme sonuçları ve ilgili olduğu değişkenler ve nedenleri üzerine birçok araştırma yapılmıştır. Erteleme alanyazını bugüne kadar birçok ilgili değişkene ışık tutmuştur. Bunların bazıları: düşük sorumluluk duygusu ve nevrozizm (D. Lee, Kelly, & Edwards, 2006), depresyon (Solomon & Rothblum, 1984; Stöber & Joormann, 2001), can sıkıntısına yatkınlık (Blunt & Pychyl, 1998; Vodanovich & Rupp, 1999), yapılacak görevin zorluğu (Ackerman & Gross, 2005), düşük öz-yeterlik (Ferrari, 1991a), düşük benlik saygısı (Klassen, Krawchuk, & Rajani, 2008), ve düşük öz-kontrolüdür (Digdon & Howell, 2008; Uzun Özer, 2010). Ancak, günümüzde de araştırmacılar erteleme davranışının kaynağı ve nasıl etkili yardım edilebileceği konusunda henüz net değillerdir (Shams, 2017).

Erteleme konusunda yapılan araştırmaların çoğu ortak bir kuram çerçevesine sahip değildir (van Eerde, 2003). Psikolojinin çeşitli alanlarında yapılan erteleme araştırmaları birbirinden ayrı olarak gelişmiş ve sistematik olmayan bir alanyazın oluşturmuştur (Klingsieck, 2013). Erteleme bir şeyle bağ kuramama/ temas edememe biçimidir (Haghbin, McCaffrey, & Pychyl, 2012). Niyetlenilen ve zamanlanmış görevlerin (örn. dönem ödevi yazma) başlatılması ve sonuçlandırılmasındaki bu kaçınma, geçici olarak olumsuz etkiyle başa çıkmak için bir duygusal düzenleme stratejisi olarak işe yarayabilir (Haghbin ve ark., 2012). Janis ve Mann'a (1979) göre, erteleme bir çeşit savunmacı kaçınma stratejisi olarak çatışmayla başatmanın bir yöntemidir. Çatışmalarla başa çıkarken savunmacı kaçınma bazen işlevsel olabilir; ancak özellikle uzun vadede kişinin ciddi kayıpları önleme şansını azaltır (Jaremko ve Meichenbaum, 2013).

Bazı kuramcılar (Burka ve Yuen, 1983; Freud, 1953; Tice, 1991), erteleme kırılgan bir benlik saygısının korunması olduğu görüşünde hemfikirdirler. Bu bakış açısına göre performans, benlik değerinin de yansıması olan yeteneğin yansımasıdır. İşleri erteleyerek, kişi, yetenek eksikliğini belirten utanç verici

çıkartımlardan kaçınmaya çalışmaktadır -ki bu çok daha utanç vericidir- ve başarı beklentisi düşük, başarısızlık korkusu yüksek olduğundan başarısızlığı başka şeylere atfeder (Covington ve Beery, 1976). Dolayısıyla, kavrama daha derinden bakıldığında, erteleme eğilimi olan kişiler kendilerine dair daha çok olumsuz özelliklerini algılayarak devam ettirdikleri olumsuz benlik algılarından dolayı sıkıntı yaşıyor olabilirler (Ferrari ve ark., 1995).

Yakın bir zamanda yapılan bir çalışmada (Eckert, Ebert, Lehr, Sieland, ve Berking, 2016), erteleme istenmeyen duygusal durumlara karşı gösterilen işlevsiz bir tepki olarak önerilmiştir. Araştırmanın bulguları, duygu düzenleme becerilerine ve erteleme eğilimine, kaçınmacı duyguları hoş görebilme edebilme yeteneğinin aracılık ettiğini göstermiştir. Ayrıca, bu bulgular kaçınmacı duyguları hoş görmeyi ve değiştirmeyi içeren duygu düzenleme becerilerinin sistematik olarak öğretilmesi yoluyla erteleme eğiliminin iyileştirilmesi konusunda ümit verici sonuçlara sahiptir. Dahası, Chen ve Qu (2017) ertelemenin hızlı bir yaşam öyküsü stratejisinin bir parçası olabileceğini belirtmiştir. Çevresel öngörülemezliğin, yavaş yaşam öyküsü stratejisiyle daha büyük bir ertelemeyi yordadığı tespit edilmiştir.

Ertelemeyi bir öz-kontrol problemi olarak gören görüşün de dikkate değer empirik bulgularla desteklendiği ve öz-kontrolün ertelemenin en güçlü belirleyicilerinden biri olduğu görülmüştür (Ariely ve Wertenbroch, 2002; Digdon ve Howell, 2008; Ferrari ve Tice, 2000; Klassen ve ark., 2008; van Eerde, 2003; Wolters, 2003). Öz-kontrol, kendine zararı olabileceği bilinen davranışlarda (örn. Sigara içme, satın alma davranışı, erteleme) bulunma dürtüsünü dizginlemektir (Faber & Vohs, 2004; Metcalfe ve Mischel, 1999). Rosenbaum ve Jaffe (1983) insanların yaşamları boyunca çeşitli stres faktörleriyle etkili bir şekilde başa çıkmalarına yardımcı olan öz-kontrol becerilerini edindiklerini belirtmiştir. Öz-kontrol seviyesi yüksek olan bireylerin, gelecekteki sonuçlar uğruna anlık memnuniyetlerini ertelemesi daha

olasıdır (Rosenbaum ve Ben-Ari Smira, 1986). Uzun Özer (2010) tarafından yapılan çalışmada öz-kontrol, erteleme ve benlik saygısı, hayal kırıklığına tahammülsüzlük, akılcı olmayan inançlar, akademik öz-yeterlik arasında aracı değişken olduğu bulunmuştur.

Ayrıca depresyon, erteleme ile en fazla ilişkili değişkenlerden birisi olarak bulunmuştur (Stöber ve Joormann, 2001). Depresyon, hoşnutsuzluk, umutsuzluk, hayatın değersizleştirilmesi, kendini küçük görme, ilgi ve katılım eksikliği, zevk almama ve durağanlıkla başgösteren bir hal olarak tanımlanmıştır (Lovibond & Lovibond, 1995). Tüm bu bulgular görev tamamlamayı zorlaştırmaktadır (Steel, 2007). Ayrıca, bazı araştırmacılar, (Abramson, Metalsky, ve Alloy, 1989; Peterson, Colvin, ve Lin, 1992) öz-kontrol ve kötümserliğin hem kuramsal hem de ampirik olarak depresyonla güçlü bir şekilde ilişkili olduğunu savunurlar.

Çeşitli kavramlar ve erteleme arasındaki ilişki ile ilgili önemli kuramsal temeller göz önünde bulundurulduğunda, bu çalışmada Öz-Belirleme Kuramı çerçevesinde üniversite öğrencilerine ait erteleme eğiliminin yordayıcılarına odaklanılacaktır. Ayrıca temel psikolojik ihtiyaçların doyumu da öz-kontrol, depresyon (Wei, Shaffer, Young ve Zakalik, 2005) ve benlik saygısı ile ilgili olduğundan, bu çalışmada oluşturulan modelde, benlik saygısı, depresyon ve öz-kontrole aracı değişkenler olarak yer vermiştir.

1.1 Araştırmanın Amacı

Bu çalışmanın amacı, temel psikolojik ihtiyaçların (özerklik, yetkinlik ve ilişkisellik) depresyon, benlik saygısı ve öz-kontrol aracılığıyla erteleme eğilimini yordamadaki rolünü açıklayan öz-belirleme kuramına dayalı bir modeli test etmektir. Ayrıca, benlik saygısı ve depresyonun da öz-kontrolü

yordayacağı varsayılmıştır. Bu doğrultuda, bu çalışmanın temel araştırma sorusu şöyledir:

Önerilen yol modelinde depresyon, benlik saygısı ve öz-kontrol aracılığıyla temel psikolojik ihtiyaçların doyumu (özerklik, yetkinlik ve ilişkililik) erteleme eğilimini ne ölçüde açıklamaktadır?

1.2 Araştırmanın Önemi

Hızla değişen bir dünyada, zamana bağlı görevleri başlatmak ve başarmak diğer çeşitli sorumluluklarla birlikte giderek daha da zor olmaktadır. Özellikle üniversite yıllarında, öğrencilerin kendi sorumluluklarını daha çok almaya başladığı zamanlarda (Tuckman, 1991), öğrencilerin birçoğu, okul çalışmaları, kişisel bakım faaliyetleri (örn. yeme, kişisel temizlik, uyku, temizlik yapma, çamaşır yıkama, alışveriş), serbest zaman etkinlikleri (sosyalleşme, egzersiz, televizyon seyretme) ve manevi faaliyetlerle (Horne, 2000) ihtiyaçlarını karşılarken dengeli ve sıralı karşılama konusunda sıkıntı çekebilirler. Bu süreçte, sürekli ve tekrar tekrar yapılan dengeleyici bir düzenlemeye ihtiyaç duyulmaktadır. Ayrıca bir görevle mümkün olduğunca tam olarak temas kurabilmek ve bitirince geri çekilebilmek de oldukça önemlidir. Temas kurma ve geri çekilmedeki problemlerin ciddi sonuçları olabilir.

Amaçlanan ve zamanla belirlenen görevleri başlatma ve gerçekleştirmede bir kaçınma olarak erteleme eğilimi, öznel iyi oluşa zarar verir (Pychyl ve Little, 1998; Sirois, Melia-Gordon, ve Pychyl, 2003). Bireyler genellikle ertelemeyi utanç verici, zararlı, istenmeyen ve kabul edilemez bir davranış olarak deneyimleyebilirler. Erteleme evrensel olarak tatsız, yorucu ve ısrarlı bir deneyimdir (Briody, 1980; Rothblum ve ark., 1986; Schouwenburg ve ark., 2004; Wei ve ark., 2005). Erteleme, 40 yıllık bir araştırma geçmişine sahip olsa da, halen kavramın daha fazla aydınlatılmasına ihtiyaç duyulmaktadır (Sham,

2017) Dolayısıyla, erteleme eğiliminin yeni kuramsal perspektifler çerçevesinde üniversite öğrencilerinde incelenmesine de halen ihtiyaç duyulmaktadır.

Erteleme, hem erteleme eğilimi olan kişi hem de çevresindeki insanlar için yorucu ve sinir bozucudur (Pychyl ve Little, 1998). Yüksek erteleme eğilimi gösteren kişiler gerekli faaliyetler yerine alakasız ve keyif verici aktivitelerle ilgilenirler. Ancak, aslında kişi, ertelemesiyle abartılı bir şekilde meşgul olduğu için (örneğin sürekli “Şimdi çalışmaya başlıyorum”, “Çalışacağım”, “Şunu da yapayım hemen çalışacağım” vb. sürüp giden teşebbüsler) yaşadığı gerilim veya suçluluktan dolayı yaptığı olumlu aktivitelerden bile keyif alamamaktadır (Nieroba ve Rist, 2011). Örneğin, kişinin ders çalışma ve serbest zamanı arasında net sınırlar yoktur. Serbest zamanında başka bir aktiviteyle uğraşırken dahi bir şekilde ders çalışmayı düşünür. Bu problemle baş etmek için, yükseköğretim kurumları, öğrencilerin çeşitli ihtiyaçlarını dengeli olarak karşılamayı öğrenebilecekleri destekleyici müdahaleler geliştirmek ve üniversite ortamını düzenlemekle sorumludur. Eğer öğrenciler ihtiyaçlarının farkına varmayı, organize etmeyi ve onları karşılamanın yollarını bulmayı öğrenirlerse, akademik bağlamda sadece akademik sorumluluklar ve zorluklarla değil, aynı zamanda yaşamın genel zorluklarıyla da başa çıkmaya hazır olacaklardır.

Alanyazında insanların ertelemenin olumsuz sonuçlarının olumlu sonuçlarından daha çok olacağını bilmesine rağmen neden hala ertelemeye devam ettiklerini gösteren birkaç açıklama vardır (örn. bir öz-kontrol problemi olduğundan dolayı) (Haghbin ve ark., 2012; Janis ve Mann, 1979; Tice, 1991). Bu konuya dair başka açıklamalar getirilmesi, erteleme kavramının daha iyi anlaşılmasına yardımcı olacaktır. Bu noktada, Öz-Belirleme Kuramı'nın (ÖBK) ihtiyaç temelli bakış açısı, ertelemeye karşılanmamış temel psikolojik

ihtiyaçlar için telafi edici bir yol olarak yaklaşarak, mevcut alanyazını genişletebilir (Deci ve Ryan, 2000).

İhtiyaç kavramı (fizyolojik ya da psikolojik), motivasyonun içeriğini belirler, eyleme geçmek için enerji sağlayan ve yön gösteren sağlam bir temel oluşturur (Deci ve Ryan, 2000). Temel psikolojik ihtiyaçların karşılanması engellendiğinde, erteleme gibi telafi edici davranışlar, savunma/kendini koruma stratejisi olarak yer alabilir (Deci ve Ryan, 2000).

ÖBK perspektifine göre, iç çatışmalar insanların enerjilerini nereye yönettikleri konusunda kararsızlaşmasına ve kafalarının karışmasına sebep olur (Deci ve Ryan, 2000). Eğer bir öğrenci ders çalışmak istediği ama çalışmadığı konusunda şikâyet ediyorsa, içinde bazı ihtiyaçlar için “Yap!” diyen ve diğer bazı ihtiyaçlar için “Ertele!” diyen iki çatışan taraf vardır. Her iki tarafın da dinlenmesi, kişinin belirli bir zamandaki tüm ihtiyaçlarını anlamak için gereklidir. Bu, onların enerjisini uygun şekilde düzenleyerek, ihtiyaçlardan birini duymamak için bastırmak yerine ihtiyaçlarını dengeli bir şekilde gidermelerini sağlayabilir.

Müdahale programları, genellikle zaman yönetimi stratejileriyle, akılcı olmayan düşünceleri değiştirerek veya "Şimdi Yap!" vb. programlar düzenleyerek yalnızca “Yap!” tarafına odaklanırlar (örneğin. Ferrari, 2010; Haghbin ve ark., 2012; Knaus, 1998; Nordby, Wang, Dahl, ve Svartdal, 2016; Uzun Özer, Demir, ve Ferrari, 2013). Erteleme davranışını tamamen ortadan kaldırmaya odaklanmak, kişinin iç çatışmasını ve erteleme davranışının kararsız doğasını daha da fazla kutuplaştırabilir. Sadece “Yap!” tarafını desteklemeye çalışmak ve diğer tarafı görmezden gelmek daha kuvvetli bir dirence neden olabilir. Gerçekten de, çeşitli müdahale programlarının erteleme eğilimi üzerindeki etkisi sınırlıdır (Ellis ve Knaus, 1979; Nordby ve ark., 2016;

Solomon ve Rothblum, 1984) ve erteleme eğiliminin tekrar etme oranı yüksektir (Ferrari ve ark., 1995).

Çeşitli araştırmaların gösterdiği gibi, sadece etkili zaman yönetimi becerilerinin öğrenilmesine yönelik müdahaleler etkili olmamaktadır çünkü erteleme zaman yönetimi becerisinden daha fazlasıdır (Beswick, Rothblum, ve Mann, 1988; Ferrari, 1991b, 1991c, 1992, 1994; Lay, 1986). Bu çalışmanın, psikolojik danışmanlara erteleme eğilimi olan kişiler ile çalışırken kişinin iç çatışmasının “Ertele!” ve “Yap!” diyen her iki tarafına da saygı ile yaklaşarak dikkat etmeleri konusunda değerli bir bakış açısı sunacağı umulmaktadır. Aynı zamanda mevcut çalışma, ertelemenin amacını ihtiyaç temelli Öz-Belirleme Kuramı çerçevesinde, karşılanmamış üç temel psikolojik ihtiyacı telafi etmek olarak araştırması açısından da önemlidir. Üniversite öğrencileri arasında Öz-Belirleme Kuramı’nın farklı yönlerinden erteleme eğilimini inceleyen sınırlı sayıda çalışma mevcuttur (Çavuşoğlu ve Karataş, 2015; Senécal ve ark., 2003; Senécal ve ark., 1995).

Bu çalışmada, Öz-Belirleme Kuramı’na dayalı olarak, erteleme eğiliminin yordanmasında hem kişiyle ilişkili ve hem kişi hem de çevreyle ilişkili faktörler test edilmeye çalışılmıştır. Çalışmadan elde edilen sonuçlar, uygulayıcılara, kişilerin hayatlarında ertelemeyi nasıl kullandıklarına, ilgilendikleri şeyleri verimli ve etkili olarak takip etmek için neye ihtiyaç duyduklarına ve bir işle nasıl bağ kurup tamamlayınca geri çekileceklerine dair farkındalık kazanmaları için yardımcı olacak uygun müdahale ve psikoeğitim programlarının tasarlamalarında yol gösterebilir.

2. YÖNTEM

2.1 Araştırmanın Deseni

Bu çalışmanın amacı, erteleme eğiliminde depresyon, benlik saygısı ve öz-kontrolün aracılığıyla temel psikolojik ihtiyaçların doyumunun rolünün araştırılmasıdır. Bu doğrultuda, ilişkisel bir araştırma deseni kullanılmıştır. Öz-Belirleme Kuramı'ndan elde edilen kavramsal modelin verilere ne kadar uyduğunu değerlendirmek için yol analizi kullanılmıştır.

2.2 Örneklem

Bu araştırmanın verileri, Ankara'daki bir özel üniversitesindeki 732 lisans öğrencisinden toplanmıştır. Veri kontrol edildikten ve kayıp veriler çıkarıldıktan sonra 721 kişi kalmıştır.

Kolay ulaşılabilirlik örnekleme yöntemi kullanılmıştır. Katılımcılardan elde edilen demografik bilgiler, 721 öğrenciden 466'sının (%64.6) kadın, 252'sinin (%35.1) erkek ve üçünün cinsiyetleri hakkında bilgi vermediğini göstermiştir. Fakülte bazında dağılımına göre katılımcıların 276'sı (%38.3) Eğitim Fakültesine, 215'i (%29.8) Mühendislik Fakültesi', 136'sı (%18.9) İktisat ve İdari Bilimler Fakültesine, 94'ü (%13) Mimarlık Fakültesine kayıtlıdır. Sınıf seviyelerine göre öğrencilerin 274'ü birinci sınıf (%38), 245'i ikinci sınıf (%34), 132'si üçüncü sınıf (18.3 %), ve 69'u dördüncü sınıftır (%9.6). Katılımcıların yaşları 17 ila 27 arasında değişmekte olup, ortalama yaş 20.57'dir (SD = 1.47). Katılımcıların akademik başarılarına ilişkin olarak, genel akademik başarı not ortalaması 2.62 (SD = .60) olup 0.32 ve 3.96 arasında değişiklik göstermiştir.

2.3 Veri Toplama Araçları

Bu çalışmada veri toplamak için altı ölçek kullanılmıştır. Tüm ölçekler için güvenilirlik ve geçerlik çalışmaları yapılmıştır.

2.3.1 Kişisel Bilgi Formu

Katılımcıların cinsiyet, yaş, fakülte, derece ve genel akademik başarı not ortalaması hakkında bilgi toplamak amacıyla, araştırmacı tarafından beş sorudan oluşan Demografik Bilgi Formu hazırlanmıştır.

2.3.2 Tuckman Erteleme Ölçeği (TEÖ)

Tuckman Erteleme Ölçeği (TEÖ), akademiyle ilgili görevlerdeki erteleme eğilimini ölçmek için Tuckman (1991) tarafından geliştirilmiştir. TEÖ akademik davranışlara ilişkin 35 madde arasına yer alan 16 maddeden oluşmaktadır (Ferrari ve ark., 1995). “1 = kesinlikle katılıyorum” ile “4 = kesinlikle katılmıyorum” seçenekleri arasında oluşan dördümlü Likert-tipi sorulardan oluşmaktadır. Maddeler ortalama bir erteleme puanı elde etmek için toplanmaktadır. Puanlar 16 ile 64 arasında değişmekte ve yüksek puanlar daha fazla erteleme eğilimini ifade etmektedir. Ölçek, toplam puanı hesaplamadan önce ters kodlama gerektiren dört ters puanlanan madde (madde 7, 12, 14, 16) içermektedir. Orjinal çalışmada, TEÖ tek boyutlu bir faktör yapısı oluşturmuş ve bir varimaks döndürmesini takiben, 16 maddelik ölçek, ortak varyansın %30'unu açıklamıştır (Tuckman, 1991).

Bir dizi çalışma TEÖ'nün yeterli güvenilirliğe ve geçerliğe sahip olduğunu göstermiştir. Orijinal çalışmada, Cronbach alfa katsayısı .86 (n = 50) ve .90 (n = 183) olarak bulunmuştur (Tuckman, 1991). Eşzamanlı geçerlik, TEÖ'nün Genel Özyeterlilik Ölçeği (r = -.47) ve davranışsal ödev tamamlama ölçeğiyle korelasyonu ile desteklenmiştir (r = -.54; Tuckman, 1991). Ayrıca, başka

çalışmalar, diğer erteleme davranışları ölçekleri PASS ($r = .68$) ile pozitif korelasyon (Howell ve Watson, 2007) ve davranışsal ölçek ile önemli ölçüde negatif korelasyon göstermiştir (Klassen ve ark., 2008).

Ölçeğin Türkçe uyarlaması Uzun Özer, Saçkes, and Tuckman (2013) tarafından yapılmıştır. Orijinal ölçekteki iki madde (madde 4 ve 10) farklı bir faktöre yüklenip, ölçümden çıkarılmıştır. 14 maddelik ölçek doğrulayıcı faktör analizi ile desteklenen tek faktörlü bir yapıya sahiptir. Ayrıca, TEÖ'nün Türkçe Versiyonu ile Yılmaz, Gürçay ve Ekici (2007) tarafından Türkçe'ye uyarlanan Akademik Öz-Yeterlilik Ölçeği arasında ($r = -.22$); ve Çuhadaroglu (1986) tarafından uyarlanan Rosenberg Benlik Saygısı Ölçeği ile TEÖ'nün Türkçe Versiyonu arasında ($r = -.23$) negatif korelasyonlar bulunmuştur. Ölçeğin Türkçe uyarlamasında, güvenilirlik tahminlerini ve puanların değişkenliğini arttırmak için ara seçenek olarak “kararsızım” cevabı eklenmiştir (1 = kesinlikle katılıyorum, 2 = katılıyorum, 3 = kararsızım, 4 = katılmıyorum, 5 = kesinlikle katılmıyorum). Bu bağlamda, yanıtlanan maddeler erteleme eğilimi puanını elde etmek için toplanmıştır. Puanlar 14 ila 70 arasında değişmektedir ve yüksek puanlar daha fazla erteleme eğilimini ifade etmektedir. 7, 10, 12 ve 14 numaralı maddelerde ters puanlama yapılmaktadır. Ölçeğin Türkçe versiyonu için Cronbach alfa değeri .90 olarak bulunmuştur.

Bu çalışmada, TEÖ'nün yapı geçerliliği, AMOS 23 yazılımı kullanılarak maksimum olabilirlik kestirimiyle Doğrulayıcı Faktör Analiziyle (DFA) test edilmiştir (Arbuckle, 2014). Model, program tarafından önerilen bir değişiklikten sonra verilere uyum sağlamıştır; $\chi^2 (76) = 337.67$, $p = .00$; $\chi^2/df = 4.44$; SRMR = .04, RMSEA = .07, CFI = .93. Bu sonuçlara göre, mevcut çalışma için TEÖ'nün yapı geçerliği kanıtlanmıştır. Ayrıca, iç tutarlılık Cronbach alfa katsayısı .90 olarak hesaplanmıştır.

2.3.3 Temel Psikolojik İhtiyaçlar Ölçeği (TPIÖ)

Temel Psikolojik İhtiyaçlar Ölçeği (TPIÖ) (Deci ve Ryan, 1991, 2000; Gagné, 2003), Öz-belirleme kuramı tarafından tanımlanan üç temel psikolojik gereksinimin karşılanma derecesini ölçmek için 21 maddeden oluşmuştur. Özerklik (Madde 1, 4(R), 8, 11 (R), 14, 17 ve 20(R)), yeterlilik (Madde 3(R), 5, 10, 13, 15(R) ve 19(R)) ve ilişkililik (Madde 2, 6, 7(R), 9, 12, 16(R), 18(R) ve 21). 1 (bana hiç uygun değil) ile 5 (bana tamamen uygun) seçenekleri arasında oluşan beşli Likert-tipi sorularlatoplam puanlar 21 ile 105 arasında değişmektedir. Bu ölçek, işyerinde ihtiyaç doyumu ölçeğinden uyarlanmıştır (Iardi, Leone, Kasser, ve Ryan, 1993). Cronbach alfa katsayıları özerklik için .69, yetkinlik için .71 ve ilişkililik için .86 bulunmuştur (Gagné, 2003).

Johnston and Finney (2010) ampirik bir çalışma olmamakla beraber ölçeğin bir ve üç faktörlü versiyonlarının varlığı doğrulayıcı faktör analiziyle test edilmiş; ancak, modellerin hiçbiri veri ile uyum sağlamamıştır (Johnston ve Finney, 2010). Daha sonra, farklı örneklerle çeşitli modelleri test ederek uyumsuzluk örüntülerini incelemiştir. Bu modellerin arasında, kısaltılmış 16 maddelik ikinci-düzye üç-faktörlü model en iyi psikometrik sonuçlara sahip olmuştur (Johnston ve Finney, 2010).

TPIÖ'nün Türkçeye ilk uyarlanması, Cihangir-Çankaya ve Bacanlı (2003) tarafından yapılmıştır. Ölçeğin iki faktörlü ve üç faktörlü versiyonlarını test etmek için doğrulayıcı faktör analizi yapılmıştır. Üç faktörlü model daha iyi sonuçlar vermiştir, RMSEA= .07, GFI= .86, AGFI= .82, CFI= .82, NFI= .80. Ancak uyum indeksleri GFI, AGFI, CFI ve NFI optimal uyum değeri olan .90'ın altında kalmıştır (Bentler ve Bonett, 1980). Ölçeğin bir başka Türkçe çevirisi Şimşek and Yalınçetin (2010) tarafından yapılmış ve bu çalışmada TPIÖ kullanılmıştır. Ölçeğin iç tutarlılığı .82 olarak bulunmuştur. Fakat, çalışmada EFA ya da CFA yapılmamıştır.

Johnston ve Finney'in (2010) CFA çalışmalarına göre, üç bağımsız faktör modeli iyi uyum endekslerine sahiptir. Satorra-Bentler χ^2 (96) = 190.74, $p < .001$, SRMR = .05, RMSEA = .04, CFI = .97. Ayrıca, üç ihtiyaç ile endişe ve iyi oluş ölçeği arasındaki farkları gösteren ilişkinin incelenmesinden toplanan dışsal geçerlik kanıtları da üç bağımsız faktör modelini desteklemiştir.

Bu doğrultuda, mevcut çalışmada, TPIÖ'nün üç bağımsız faktör modelinin yapı geçerliği, AMOS 23 yazılımı kullanılarak maksimum olabilirlik kestirimiyle Doğrulayıcı Faktör Analizi (DFA) ile test edilip doğrulanmıştır (Arbuckle, 2014). İç tutarlılık Cronbach alfa katsayıları sırasıyla özerklik, yetkinlik ve ilişkililik modelleri için .71, .69, ve .77 olarak hesaplanmıştır.

2.3.4 Depresyon Anksiyete Stres Ölçeği (DASÖ)

Depresyon Anksiyete Stres Ölçeği (DASÖ) depresyon, anksiyete ve stresin mevcut semptomlarını belirlemek için Lovibond ve Lovibond (1995) tarafından geliştirilen 42 maddelik bir ölçektir. Bu çalışmada, sadece erteleme eğilimi ile ilgili en yüksek korelasyonlu alt ölçek olan ve disfonik duygudurum, umutsuzluk, hayatın değersizleşmesi, kendini beğenmeme, ilgi/katılım eksikliği, anhedoni ve atalet ile ilgili maddeden oluşan depresyon alt boyutu kullanılmıştır. 1 (hiçbir zaman geçerli değil) ve 4 (her zaman geçerli) seçenekleri arasında oluşan dördümlü Likert-tipi sorularla, toplam puanlar 14 ile 56 arasında değişmektedir. Depresyon alt boyutu 3, 5, 10, 13, 16, 17, 21, 24, 26, 31, 34, 37, 38 ve 42. Maddeleri içermektedir. DASÖ-42 alt ölçeklerinin Cronbach alfa katsayıları sırasıyla depresyon, anksiyete ve stres için .94, .88 ve .93 olarak bulunmuştur (Nieuwenhuijsen, de Boer, Verbeek, Blonk, ve van Dijk, 2003). Aynı çalışmada, faktör analizi, üç faktörlü bir yapı ortaya koymuştur.

DASÖ-42'nin faktör yapısı hem açıklayıcı hem de doğrulayıcı faktör analizi ile doğrulanmıştır (Lovibond ve Lovibond, 1995). DASÖ-42 Depresyon Ölçeği için Cronbach alfa değeri .91 olarak hesaplanmıştır.

DASÖ-42'nin Türkçe versiyonunun psikometrik özellikleri, Bilgel ve Bayram (2010) tarafından 1102 üniversite öğrencisinden elde edilen verilerle araştırılmıştır. Depresyon için madde ölçek korelasyonları ile ölçülen yapı geçerliliği .48 ile .70 arasında değişmektedir. Yapı geçerliliği açısından, Türkçe DASÖ-42 Depresyon Ölçeği, Hastane Anksiyete ve Depresyon Ölçeği ile yüksek oranda korelasyon göstermiştir ($r = .64$). DASÖ-42 Depresyon ölçeğinin Türkçe versiyonu için Cronbach alfa katsayısı .92 olarak hesaplanmıştır (Bilgel ve Bayram, 2010).

Bu çalışmada, TEÖ'nün yapı geçerliliği test edilmiştir. Model, program tarafından önerilen küçük değişikliklerden sonra verilere uymuştur; χ^2 değeri 334.46 ve df 69'dur. Normlu ki-kare değeri kabul edilebilir bir oran olan 4.85'tir. Ki-kare istatistiklerine ek olarak, uyum indekslerinin diğer iyiliği, modelin verileri çok iyi bir şekilde karşıladığını göstermiştir, SRMR=.04, CFI=.97, RMSEA=.07. Bu sonuçlar, bu çalışmada DASÖ depresyon alt boyutunun yapı geçerliliğinin sağlandığını göstermiştir. Ayrıca, iç geçerliliği için Cronbach alfa katsayısı .95 olarak hesaplanmıştır.

2.3.5 Rosenberg Benlik Saygısı Ölçeği (RBSÖ)

Rosenberg Benlik Saygısı Ölçeği (RBSÖ) Rosenberg (1965) tarafından geliştirilmiştir. Kendiyle ilgili hem olumlu hem de olumsuz duyguları ölçerek, genel benlik saygısı ya da öz-değerin ölçümünde yaygın olarak kullanılan bir ölçektir. RBSÖ, 1 = kesinlikle katılmıyorum ile 4 = kesinlikle katılıyorum seçeneklerinden oluşan dörtlü Likert-tipi sorulara sahip 10 maddeden oluşmaktadır. Madde 1, 2, 4, 6 ve 7 ters kodlanmıştır. Ölçek beşi olumlu ve

beşi olumsuz bir şekilde ifade edilmiş maddelerden oluşmaktadır. Yanıtlar 10 ile 40 arasında değişen bir toplam puan elde etmek için toplanır.

Rosenberg (1965), ölçeğin iç tutarlılığının yüksek olduğunu bildirmiştir ($\alpha = .80$). Test-yeniden test güvenilirliği iki haftalık aralık için 0.85, yedi aylık aralık için 0.63 olarak hesaplanmıştır (Shorkey ve Whiteman, 1978; Silber ve Tippett, 1965). RBSÖ, Coopersmith Benlik Saygısı Envanteri ($r = .60$) (Coopersmith, 1967) ve Sağlık Özeleştirici Anketi ($r = .83$) ile yakından ilişkilidir.

Ölçeğin Türkçe uyarlaması Çuhadaroğlu (1986) tarafından yapılmıştır. Puanlama ölçeği, Türkçe versiyonunda “çok doğru” dan “çok yanlış” arasında değişmektedir. Psikiyatrik görüşmeler ile benlik saygısı ölçeği arasındaki korelasyon 4 haftalık bir süre içinde .71 olarak bulunmuştur. Ölçeğin test-yeniden test güvenilirlik katsayısı .75’tir.

Bu çalışmada, RBSÖ'nün yapı geçerliği test edilmiştir. Model, program tarafından önerilen küçük değişikliklerden sonra verilerle uyum sağlamıştır; χ^2 değeri 138.47 ve df 31 olarak bulunmuştur. Normlu ki-kare değeri kabul edilebilir bir oran olan 4.47'tir. Ki-kare istatistiklerine ek olarak, diğer uyum indeksleri, modelin verilerle çok iyi uyum sağladığını göstermiştir, SRMR=.04, CFI=.97, RMSEA=.07. Bu sonuçlar, bu çalışmada RBSÖ'nün yapı geçerliliğinin sağlandığını göstermiştir.

2.3.6 Öz-Kontrol Envanteri (ÖKE)

Öz-Kontrol Envanteri (ÖKE) (Rosenbaum, 1980) öğrencilerin davranışsal sorunları çözme amaçlı öz kontrol yöntemlerini kullanma eğilimini ölçmek için 36 maddeden oluşmaktadır. Nötr yanıt alternatifi olmaksızın -3 (beni hiç tanımlamaz) ile +3 (beni çok iyi tanımlar) seçeneklerinden oluşan altılı Likert-

tipi maddelerden oluşmaktadır. Daha yüksek puanlar daha fazla öz-kontrol gösterir. 11 madde (Madde 4, 6, 8, 9, 14, 16, 18, 19, 21, 29 ve 35) ters kodlanmıştır.

Altı farklı örnek üzerinde hesaplanan alfa katsayıları, yüksek iç tutarlılığı belirten .78 ile .86 oranları arasında değişmektedir. ÖKE'nin geçerlik kanıtı, Croskey'in İletişim Anlayışının Ölçümü ile olan korelasyonlar tarafından sağlanmıştır ($r = -.37$; Rosenbaum, 1980). Ayrıca, ÖKE'nin, Rotter'in Kontrol Odağı Ölçeği ($r = -.37$) ve Manifest Anksiyete Ölçeği ile negatif korelasyonlu olduğu bulunmuştur ($r = -.56$; Richards, 1985). McWhirter, Burrow-Sanchez, ve Townsend (2008)'in geçerlik çalışmalarında azaltılmış 22 maddelik üç faktörlü bir yapı ortaya konmuştur (McWhirter ve ark., 2008).

Ölçeğin Türkçe uyarlaması Siva (1991) tarafından yapılmıştır. Türkçe uyarlamasında, beşli bir Likert-tipi sorular (1 = hiç tanımlamıyor, 5 = çok iyi tanımlıyor) kullanılmıştır. Toplam puanlar 36 ile 180 arasında değişmekte ve yüksek puanlar yüksek öz-kontrolü göstermektedir.

Ölçeğin faktör yapısı temel bileşen analizi ile araştırılmış, varimax döndürme sonuçlarından 12 faktör çıkmıştır ve bu faktörler toplam varyansın %58.2'sini açıklamıştır (Dağ, 1991). Ayrıca, ÖKE ve Rotter'in Kontrol Odağı Ölçeği arasında $-.29$ 'luk bir kriter geçerlik katsayısı rapor edilmiştir (Dağ, 1991). Test-yeniden test korelasyonu $.80$, iki örneklem için Cronbach alfa değeri $.85$ ve $.78$ olarak bulunmuştur (Dağ, 1991).

Bu çalışmada ölçeğin üç faktörlü azaltılmış 22 madde versiyonu ile yapı geçerliği test edilmiştir. Model, program tarafından önerilen küçük değişikliklerden sonra verilere uymuştur; χ^2 değeri 521.88 ve df 201 olarak bulunmuştur. Normlu ki-kare değeri kabul edilebilir bir oran olan 2.60'tır. Ki-kare istatistiklerine ek olarak, uyum indekslerinin diğer iyiliği, modelin verileri

çok iyi bir şekilde karşıladığını göstermiştir, SRMR=.07, CFI=.90, RMSEA=.05. Sonuçlar, mevcut çalışma için 22 maddelik ölçeğin üç faktörlü yapısını kanıtlamıştır. Toplam ölçek için iç güvenirlik Cronbach alfa katsayısı .75 olarak hesaplanmıştır.

2.4 Veri Toplama Süreci

Veriler, araştırmacı tarafından 2016-2017 öğretim yılı güz yarıyılı sonunda dört haftalık bir sürede toplanmıştır. İnsan Hakları Etik Kurulu (İHEK) onayı Orta Doğu Teknik Üniversitesi'nden alınmıştır. Bir set olarak tüm ölçekler ders saatlerinde çoğunlukla araştırmacı tarafından uygulanmış ve aynı anda gerçekleşen birkaç ders için araştırmacı yardım almıştır. Ölçeklerin uygulanmasından önce, her sınıfın hocasından izin ve katılımcılardan onayları alınmıştır. Katılımcılar hakkında herhangi bir tanımlayıcı bilgi, gizlilik ve anonimlik sağlaması açısından istenmemiştir. Tüm ölçeklerin tamamlanması yaklaşık 20 dakika sürmüştür.

2.5 Veri Analizi

Bu çalışmanın amacı, Öz-Belirleme Kuramı'na dayanan bir erteleme modelini test etmektir. Bu amaçla, bağımlı, bağımsız ve aracı değişkenler arasındaki kuramsal ilişkiler AMOS 23 yazılımı kullanılarak yol analizi yöntemiyle incelenmiştir (Arbuckle, 2014).

3. BULGULAR

Katılımcıların erteleme eğilimi düzeyleri için elde edilen ortalama puan 43.5 olarak bulunmuştur (SD = 10.94). Puanlar 14 ila 70 arasında değişmektedir ve yüksek puanlar daha fazla erteleme eğilimini ifade etmektedir.

Diğer çalışma değişkenlerine bakıldığında, öz-kontrol ortalama puanlarının 116.33 (SS = 16.55), ortalama depresyon puanlarının 29.27 (SS = 11.08), benlik saygısı puan ortalamalarının 30.68 (SS = 5.79), özerklik ihtiyacı doyum puan ortalamalarının 25.41 (SS = 4.69), yeterlilik ihtiyacının doyum puan ortalamalarının 21.43 (SS = 4.26), ve son olarak ilişkililik ihtiyacı doyum puan ortalamalarının 30,74 (SD = 5.22) olduğu bulunmuştur.

Betimsel analize ek olarak, korelasyonlar, ilişkilerin betimlenmesi ve aynı zamanda tüm çalışma değişkenleri arasında mükemmel çoklu-doğrusallık olup olmadığının kontrol edilmesi için hesaplanmıştır. Kuramsal beklentilerle uyumlu olarak, depresyonun erteleme ile pozitif; öz-kontrol, benlik saygısı, özerklik, yeterlilik ve ilişkililik ihtiyacı doyumunun ise erteleme ile negatif ilişkili olduğu bulunmuştur.

Yol analizi için öncelikle varsayımlar kontrol edilip sağlanmıştır. Analiz, model ile veriler arasında yüksek bir uyum olduğunu göstererek verilerin modele uygun olduğunu göstermiştir; $\chi^2 / df = .96$; RMSEA = .00; GFI = 1.00; AGFI = .99, NFI = 1, TLI = 1.00.

Erteleme; öz-kontrol, yeterlilik ihtiyacı doyumunu, ilişkililik ihtiyacı doyumunu ve depresyon ile yordamıştır. Bu dört değişken, erteleme konusundaki toplam varyansın %23'ünü açıklamaktadır. Öz-kontrol; yeterlilik ihtiyacı doyumunu, depresyon ve benlik saygısı ile yordamıştır. Öz-kontrolde bu değişkenler tarafından açıklanan toplam varyans %25'tir. Benlik saygısı; özerklik ihtiyacı doyumunu ve yeterlilik ihtiyaç doyumunu ile yordamıştır. Bu iki değişken, depresyondaki toplam varyansın %30'unu açıklamaktadır. Son olarak, depresyon; yeterlilik ihtiyacı doyumunu ve benlik saygısı ile yordamıştır. Bu değişkenler, benlik saygısındaki toplam varyansın %43'ünü açıklamaktadır.

Yol analizinin sonuçları, öz-kontrolün erteleme davranışı üzerinde istatistiksel olarak anlamlı ve doğrudan bir etkiye sahip olduğunu göstermiştir ($\beta = -.30$, $p < .05$). Depresyon aynı zamanda ertelemenin ($\beta = .18$, $p < .05$) ve öz-kontrolün ($\beta = -.16$, $p < .05$) doğrudan yordayıcısı olarak bulunmuştur. Bu nedenle, depresyonun, öz-kontrol yoluyla erteleme üzerinde dolaylı etkisi de vardır ($\beta = .05$, $p < .05$).

Ek olarak, benlik saygısı depresyonun doğrudan ($\beta = -.33$, $p < .05$) ve öz-kontrolün anlamlı yordayıcısı olarak bulunmuştur ($\beta = -.16$, $p < .05$). Bundan dolayı, benlik saygısı depresyon aracılığıyla öz-kontrol üzerinde dolaylı etkiye sahiptir ($\beta = .05$, $p < .05$).

Öte yandan benlik saygısı, öz-kontrol üzerinde hem doğrudan hem de dolaylı (depresyon yoluyla) etkilere sahiptir (sırasıyla, $\beta = .14$, $p < .05$; $\beta = .05$, $p < .05$). Öz-kontrol ve depresyonun, erteleme davranışı üzerine istatistiksel olarak doğrudan yordayıcı etkiye sahip olmasından dolayı ($\beta = -.30$, $p < .05$ ve $\beta = .18$, $p < .05$), benlik saygısı, öz-kontrol ve depresyon yoluyla erteleme üzerine dolaylı bir etkiye sahiptir ($\beta = -.12$, $p < .05$).

Özerklik ihtiyacı doyumunun, benlik saygısı yoluyla öz-kontrol üzerinde önemli dolaylı bir etkisi vardır ($\beta = .04$, $p < .05$). Öte yandan, özerklik ihtiyacı doyumundan depresyona giden yol istatistiksel olarak anlamlı bulunmamıştır ($\beta = -.06$, $p > .05$). Benlik saygısı, özerklik ihtiyacı doyumunu ve depresyon arasındaki ilişkiye aracılık etmiştir ($\beta = -.05$, $p < .05$). Özerklik ihtiyacı doyumunu, benlik saygısı ve öz-kontrol yoluyla erteleme davranışı üzerine dolaylı bir etkiye sahiptir ($\beta = -.05$, $p < .05$).

Yeterlilik ihtiyacı doyumunu, hem doğrudan ($\beta = -.19$, $p < .05$) hem de dolaylı olarak ($\beta = -.18$, $p < .05$) erteleme eğilimini yordamaktadır. Benzer şekilde, yeterlilik ihtiyaç doyumunu, hem doğrudan ($\beta = .20$, $p < .05$) hem de dolaylı

olarak ($\beta = .14, p < .05$) öz-kontrolü yordamaktadır. Yeterlilik ihtiyacı doyumunun, depresyon ($\beta = -.21, p < .05$), ve benlik saygısı ($\beta = .55, p < .05$) üzerinde istatistiksel olarak anlamlı bir etkiye sahip olduğundan, depresyon ve benlik saygısı yoluyla yeterlilik ihtiyacı doyumunu ile öz-kontrol arasındaki ilişki için iki dolaylı yol vardır.

Yeterlilik ihtiyacı doyumunu, hem doğrudan ($\beta = -.19, p < .05$) hem de dolaylı olarak ($\beta = -.18, p < .05$) erteleme eğilimini yordamaktadır. Benzer şekilde, yeterlilik ihtiyacı doyumunu, hem doğrudan ($\beta = .20, p < .05$) hem de dolaylı olarak ($\beta = .14, p < .05$) öz-kontrolü yordamaktadır. Yeterlilik ihtiyacı doyumunun, depresyon ($\beta = -.21, p < .05$), ve benlik saygısı ($\beta = .55, p < .05$) üzerinde istatistiksel olarak anlamlı bir etkiye sahip olduğundan, depresyon ve benlik saygısı yoluyla yeterlilik ihtiyacı doyumunu ile öz-kontrol arasındaki ilişki için iki dolaylı yol vardır.

Ayrıca, benlik saygısı, öz-kontrolü ($\beta = .14, p < .05$) ve yeterlilik ihtiyacını yordadığından, benlik saygısı yeterlilik ihtiyacı doyumunu ile öz-kontrol arasındaki ilişkiye de kısmen aracılık etmiştir. Ek olarak, benlik saygısı, yeterlilik ihtiyacı doyumunu ve depresyon arasındaki dolaylı ilişkiye de tam aracılık etmiştir ($\beta = -.18, p < .05$). Depresyon, öz-kontrol ve benlik saygısının tümü aracılığıyla yeterlilik ihtiyacı doyumunun, erteleme üzerinde dolaylı bir etkisi vardır ($\beta = -.18, p < .05$).

İlişkililik ihtiyacı doyumundan gelen üç doğrudan yol, depresyon ($\beta = -.03, p > .05$), benlik saygısı ($\beta = .02, p > .05$) ve öz-kontrol ($\beta = .08, p > .05$) için istatistiksel olarak anlamlıdır. Ancak, yüksek ilişkililik ihtiyacı doyumunu erteleme üzerinde doğrudan pozitif bir etkiye sahiptir ($\beta = .16, p < .05$).

4. TARTIŞMA

Bu çalışmada, bulgular, tüm temel psikolojik ihtiyaçlar arasında anlamlı ve pozitif bir ilişki olduğunu göstermiştir. Bir diğer deyişle, öğrenciler özerklik ihtiyaçlarını daha fazla karşıladıklarında, yeterlilik ve ilişkililik ihtiyaçlarını da daha fazla karşılarlar. Aynı sonuç, her üç ihtiyaç için de geçerlidir, bunlardan birini tatmin ettiklerinde, diğer iki ihtiyacı da tatmin ederler. Bu sonuç, üç ihtiyacın hepsinin birbiriyle orta derecede ilişkili olduğunu gösteren önceki çalışmaları desteklemektedir (Deci ve Ryan, 2000; Nishimura ve Suzuki, 2016). Ryan'ın (1993) çalışmasında, insanlar, yetkinlik ve ilişkililik hisleri kendi özerkliklerinden kaynaklandığında, optimal bağ kurma ve psikolojik iyi oluş sergilemektedir. Bir diğer deyişle, insanlar tüm temel psikolojik ihtiyaçlarını dengeli olarak karşılayabildiklerinde, baskı ve talepten ziyade irade ve tercih ile hareket edebilirler (Ryan, 1993).

Benlik saygısı ve depresyon arasında anlamlı bir negatif ilişki bulunmuştur. Benlik saygısı azaldıkça, insanlar daha fazla depresyon yaşamaktadır. Sonuçlar, düşük benlik saygısının depresyon için bir risk faktörü olarak hareket ettiğini belirten önceki bulguları destekler niteliktedir (A. T. Beck, 1967; Orth ve ark., 2014) ve birçok boylamsal araştırma düşük benlik saygısının depresyonu yordadığını göstermiştir (örneğin. Kernis, 2003; Orth ve ark., 2014). Dahası, ÖBK perspektifine göre, eğer insanların gerçek bir benlik saygısı yerine, benlik saygısı sorunları varsa, bu durum depresyon gibi psikolojik sağlık sorunlarına yol açmaktadır (Ryan ve Brown, 2003). Başka bir deyişle, benlik saygısı gibi bir problemleri olmadığında, kişilerin sağlıklı olmaları daha olasıdır, çünkü insanlar “Benliğime değer veriyor muyum, vermiyor muyum?” diye sorgulamazlar benlik saygısı problemleri olmadığında. Bu bakış açısının aksine, diğer bazı araştırmalar düşük benlik saygısının depresyonun bir sonucu olduğunu belirtmiştir (Coyne, Gallo, Klinkman, ve Calarco, 1998; Shahar ve Davidson, 2003). Bütüncül bir bakış

açısıyla, benlik saygısının depresyonun hem nedeni hem de sonucu olabileceği görülmektedir. ÖBK çerçevesinde, mevcut çalışma, benlik saygısı çizgisini, depresyonun bir yordayıcısı olarak izlemiş ve sonra bu yoldan erteleme yordanmıştır.

Bulgular ayrıca depresyon ve öz-kontrol arasında anlamlı negatif bir ilişki göstermiştir. Daha düşük düzeyde depresyona sahip öğrencilerin daha fazla öz-kontrolü vardır. Brinkmann ve Franzen'in (2015) belirttiği gibi, depresyon, davranışların öz-düzenlenmesiyle ilgili çok kapsamlı bir süreçle ilişkilidir. Uzun Özer ve arkadaşlarının (2014) lisans öğrencileri ile yaptığı çalışmada, depresyonun öz-kontrol ile ilişkili olmasının yanı sıra, öz-kontrolün depresyon ve erteleme arasında aracı değişken olduğu belirlenmiştir. Öte yandan, benlik saygısı alanyazınına benzer şekilde, düşük öz-kontrolün depresyonu yordadığını belirten başka araştırmalarda (Strauman, 2002) depresyon da öz-düzenleme bozukluğu olarak görülmektedir. Depresyonun erteleme ile son derece ilişkili olması nedeniyle, bu çalışma, depresyonu öz-kontrolün bir yordayıcısı olarak içermekte ve bu durum da erteleme eğilimine yol açmaktadır.

Ayrıca, benlik saygısı ve öz-kontrol arasında anlamlı bir pozitif ilişki vardır. Diğer bir deyişle, insanların benlik saygısı azaldıkça, öz-kontrol düzeyleri de azalır. Alanyazında, bu iki kavramla ilgili sınırlı sayıda araştırma bulunmaktadır. ÖBK yaklaşımında, kırılğan benlik saygısı özerk öz-denetim eksikliği ile ilişkili olarak görülmektedir (Deci ve Ryan, 1991; Ryan ve Brown, 2003).

Bulgular ayrıca depresyon ile erteleme eğilimi arasındaki dikkate değer pozitif ilişkiyi ortaya koymuştur, bu da öğrencilerin daha ağır depresyonda olmalarının, daha fazla erteleme eğilimini ortaya çıkaracağı anlamına gelmektedir. Bu, ilgili alanyazın ışığında beklenen bir sonuçtur. Lisans

öğrencileri ile yapılan çeşitli çalışmalarda belirtildiği gibi (örneğin. Beswick ve ark., 1988; Senécal ve ark., 1995; Uzun Özer ve ark., 2014), erteleme eğilimi ile depresyon arasında anlamlı bir ilişki bulunmaktadır.

Son olarak, öz-kontrol ve erteleme eğilimi arasında anlamlı bir negatif ilişki vardır. Bu sonuç, daha az öz-kontrole sahip öğrencilerin, daha fazla erteleme eğiliminde olduklarını göstermiştir. Bu bulgu, öz-kontrolün, erteleme eğiliminin en güçlü belirleyicilerinden biri olduğunu gösteren önceki çalışmalarla doğrulanmıştır (E. M. Anderson, 2001; Uzun Özer, 2010; Wolters, 2003).

Bulgular, özerklik ve yeterlilik ihtiyacı doyumu ile benlik saygısı arasında pozitif yönde anlamlı bir ilişki olduğunu göstermiştir. Bir diğer deyişle, öğrenciler özerkliklerini ve yetkinlik ihtiyaçlarını daha fazla karşıladıklarında, daha yüksek benlik saygısına sahip olma eğilimindedirler. Ancak, beklentilerin aksine, ilişkililik ihtiyacı doyumu ile benlik saygısı arasında anlamlı bir ilişki bulunmamıştır. Alanyazında, temel psikolojik gereksinimlerin (bir ya da daha fazla ihtiyaç) ne kadar azı doyuma ihtiyaç duyarsa, öğrencilerin, kendilerinin sahip oldukları değerle o kadar çok ilgilendikleri belirtilmektedir (Ryan ve Brown, 2003; Sheldon ve ark., 1996). Bir diğer deyişle, özgünlük, etkililik ya da bir aşk duygusunun eksikliğinden dolayı, insanlar değerli hissetmezler. Sheldon ve ark. (1996) ayrıca özerklik ve yeterlilik ihtiyacı doyumunun benlik saygısı ile pozitif ilişkili olduğunu belirtmiştir. Bu açıdan bakıldığında, özerklik ihtiyacı doyumu ile benlik saygısı arasındaki ilişkiye ilişkin mevcut çalışmanın bulguları ve yeterlilik ihtiyacı doyumu önceki bulguları desteklemektedir. İlişkililik ihtiyacı doyumu ile benlik saygısı arasındaki ilişkiye ilişkin beklenmedik bir sonuç, katılımcıların ilişkililik ihtiyacı doyumu ve diğer iki ihtiyaçların ortalama değerleri arasında fark ile ilgili olabilir. İlişkililik ihtiyacı doyumundaki, görece yüksek puanlar, katılımcıların üç ihtiyaç doyumu arasından ilişkililik ihtiyaçlarını diğer ihtiyaçlarından daha çok

karşılamları gibi bir denge güçlüğüyle ilgili olabilir. Bu nedenle, benlik saygısı üzerinde hiçbir etkisi olmamıştır. Ancak, bu sonuç, Öz Belirleme Kuramı'nın "Benlik sayısı sadece ihtiyaçlar karşılanmadığında bir problemdir" argümanını desteklediği düşünülebilir.

Bulgular, gerek özerklik ihtiyacı doyumu ile öz-kontrol ve ilişkililik ihtiyacı doyumu ile öz-kontrol arasında anlamlı bir ilişki olduğunu göstermemiştir. Sadece yeterlilik ihtiyacı doyumunun, öz kontrol ile pozitif ilişkili olduğu bulunmuştur. Alanyazında, temel psikolojik ihtiyaçlar doyumu ile öz-kontrol arasındaki doğrudan ilişkiyi gösteren çalışmalar vardır, ancak onlar, Hanfstingl, Andreitz, Müller, ve Thomas (2010) gibi üç ihtiyacı bir araya getirmişlerdir, ve Orkibi ve Ronen (2017) temel psikolojik ihtiyaçlar doyumu ve öz-kontrolün, birbirleriyle oldukça alakalı ve pozitif olduğunu bulmuştur. Ayrıca, ihtiyaç hayal kırıklığı azalmış öz-kontrol ile ilgilidir, çünkü mevcut enerjiyi emmektedir. (Moller, Deci, ve Ryan, 2006). Özellikle yeterlilik ihtiyacı doyumu öz-kontrol ile ilişkili olabilir, çünkü kişinin sosyal çevre ile etkileşimlerinde etkili olduğunu hissettiği dereceyi de içerir (Deci ve Ryan, 2000), böylece insanlar deneyimleyebilirlerse kendi çevrelerini de etkileyebilirler, daha sonra kendilerine mal olmasıyla bilinen davranışlarda bulunmak üzere dürtülerini kontrol etmek için daha fazla isteklilik gösterebilirler (Metcalf ve Mischel, 1999). Benzer şekilde, hem özerklik ihtiyacı doyumu ile depresyon hem de ilişkililik ihtiyacı doyumu ve depresyon arasındaki ilişki istatistiksel olarak anlamsızdır. Yeterlilik ihtiyacı doyumu ve depresyon birbirleriyle olumsuz bir şekilde ilişkilidirler. Alanyazın ile uyumlu olarak, daha fazla yeterlilik ihtiyacı doyumuna sahip olan öğrenci, daha az depresyon yaşamaşaktadır (B. Chen ve ark., 2015).

Son olarak doğrudan ilişkiler için, sonuçlar yeterlilik ihtiyacı doyumu ve erteleme eğilimi arasında anlamlı bir negatif ilişki olduğunu ve ilişkililik ihtiyacı doyumu ile ertelenme eğilimi arasında kayda değer bir pozitif ilişki

olduğunu doğrulamıştır. Diğer bir deyişle, daha yüksek yeterlilik ihtiyacı doyumunu, daha düşük erteleme eğilimi ile ilişkiliyken, daha yüksek ilişkililik ihtiyacı doyumunu, daha yüksek erteleme eğilimi ile ilgilidir. Alanyazında, temel psikolojik ihtiyaç doyumundan ve erteleme eğiliminin olumsuz yönde ilişkili olduğundan bahseden tek bir çalışma vardır, ancak bu çalışma üç ihtiyacı birlikte ele almıştır (Çavuşoğlu ve Karataş, 2015). Mevcut çalışmada, ilişkililik ihtiyacı doyumunu ile erteleme eğilimi arasındaki ilişkiyle alakalı beklenmedik sonuç, katılımcıların ilişkililik ihtiyacı doyumunu ve diğer iki ihtiyacının ortalama değerleri arasındaki fark ile ilişkili olabilir. İlişkililik ihtiyacı doyumundaki, göreceli olarak yüksek puanlar, katılımcıların üç ihtiyaç doyumundan ilişkililik ihtiyaçlarını diğer ihtiyaçlarından daha çok tatmin etmeleri gibi bir dengesizlik belirtebilir. Başkalarına ve ilişkililiğe bağlı hissetme konusunda daha fazla endişe duyabilirler ve bu üç ihtiyacı karşılamadaki bu dengesizlik yüksek erteleme eğilimine sebep olabilir.

Bu çalışmada benlik saygısı, depresyon yoluyla öz-kontrol ile dolaylı ve pozitif ilişkili bulunmuştur. Bir diğer deyişle, daha yüksek benlik saygısı olan öğrenciler, düşük depresyon düzeyine sahip olduklarında daha yüksek öz-kontrole sahiptirler. Ayrıca sonuçlar, benlik saygısının hem depresyon hem de öz-kontrol yoluyla ertelemeeğilimi üzerinde olumsuz bir dolaylı etkiye sahip olduğunu göstermiştir. Diğer bir deyişle, daha fazla benlik saygısı, öğrenciler daha az depresyona ve daha fazla öz-kontrole sahip olduklarında, daha az erteleme eğilimi ile ilişkilendirilmiştir.

Bu üç dolaylı ilişki birlikte ele alındığında, önerilen değişkenlerle depresyonun dolaylı etkisi üzerine yapılan araştırma eksikliği nedeniyle, doğrudan ilişkiler bir ilham kaynağı olabilir. Alanyazının, benlik saygısı ve depresyon ile birlikte öz-kontrolün doğrudan ilişkilerini (A. T. Beck, 1967; Kernis, 2003; Orth ve ark., 2014) ve öz-kontrol ile birlikte erteleme eğilimi ve depresyonun doğrudan ilişkisini (Beswick ve ark., 1988; Brinkmann ve Franzen, 2015; Senécal ve

ark., 1995) gösterdiği gibi, dolaylı işbirlikleri beklendiği gibi onaylanmıştır. Bu sonuçlar, benlik saygısı problemlerinin, depresyon ve öz-kontrol yoluyla erteleme gibi psikolojik sağlık problemlerinde önemli bir faktör olduğunu gösteren çalışmalarla uyumludur (Ryan ve Brown, 2003).

Bulgular ayrıca depresyonun öz-kontrol yoluyla erteleme üzerinde dolaylı bir pozitif etkiye sahip olduğunu göstermiştir. Böylece, depresyon ve erteleme eğilimi arasındaki ilişki, öz-kontrolün etkisi ile hala anlamlıdır. Anlamlı olumlu toplam etkileri de depresyon ve erteleme arasındaki ilişkiyi desteklemektedir. Bu bulgu, öğrencilerin daha az öz-kontrol sahibi olduğu zaman, daha fazla depresyonun daha fazla erteleme eğilimi ile ilişkili olduğunu göstermiştir. Bulgu; daha önceki bulguları desteklemiş, depresyonun, öz-kontrolün dolaylı etkisi ile erteleme eğilimi üzerinde olumlu bir etkiye sahip olduğunu göstermiştir (Uzun Özer ve ark., 2014). İnsanlar kendilerini izlemeyi bırakırsa veya hedefleri açık ve tutarlı değilse veya kontrollerini kaybetme eğilimindeyseler; Carver ve Scheier'in (1981) belirttiği gibi, öz-kontrolün hayati rolü, kişinin eylemlerini ve durumlarını yakından takip etmektir. Dahası, ders çalışmayı dürtüsel bir şekilde erteleseler bile, erteleme eğiliminin oluşmasını engellemekten ziyade öz-kontrolleriyle tepki verme biçimlerini yeniden düzenleyerek erteleme eğilimine dönüşmesini engelleyebilirler. Öz-kontrollerini depresif hissederek engelleyebilirler ki bu da ertelemeye yol açar. Bu nedenle, problemlili olan kısım erteleme davranışı değil, erteleme davranışını engelleme yolunda öz-kontrol (benlik saygısı problemleri ve depresyona dayanan) eksikliğidir.

Alanyazında, benlik saygısı, depresyon ve öz-kontrolün temel psikolojik ihtiyaçlar ile erteleme eğilimi arasındaki dolaylı etkilerini araştıran bir çalışma bulunmamıştır. Bu araştırma eksikliği nedeniyle, doğrudan ilişkiler bir ilham kaynağı olabilir. Ayrıca, özerklik ve yeterlilik ihtiyacı doyumunun doğrudan ilişkileri, benlik saygısı ile olumlu ilişkilidir (Sheldon ve ark., 1996); temel

psikolojik ihtiya doyumunu ve z-kontrol, birbirleriyle pozitif bir şekilde olduka alakalıdır (Hanfstingl ve ark., 2010); yeterlilik ihtiya doyumunu ve depresyon birbiriyle (B. Chen ve ark., 2015); ve temel psikolojik ihtiyalar doyumunu ile erteleme olumsuz iliřkilidir (avuřođlu ve Karatař, 2015), dolaylı iliřkilerin ođu, z-belirleme kuramına temelinde beklendiđi gibi dođrulanmıřtır.

Birincisi, benlik saygısı yoluyla zerklik ihtiya doyumunun, dolaylı ve olumsuz bir şekilde depresyonla negatif iliřkili olduđu bulunmuřtur. Bir diđer deyiřle, yksek zerklik ihtiya doyumunu olan đrencilerin yksek benlik saygısına sahip olması sonucunda depresyon ihtimali dřk olmaktadır. Ayrıca, bulgular, benlik saygısı aracılıđıyla zerklik ihtiya doyumunu ile z-kontrol arasında pozitif dolaylı bir iliřki olduđunu gstermiřtir. Bir diđer deyiřle, benlik saygısının etkisiyle birlikte zerklik ihtiya doyumunu ile z-kontrol arasındaki iliřki hala anlamlıdır. Bu, đrencilerin daha fazla benlik saygısı sahibi olduklarında daha fazla zerklik ihtiya doyumunun, daha fazla z-kontrol ile iliřkili olduđunu gstermiřtir. Ayrıca, zerklik ihtiya doyumunu benlik saygısından z-kontrole giden yol aracılıđıyla, erteleme ile dolaylı ve olumsuz bir iliřkide olduđu bulunmuřtur. Bařka bir deyiřle, yksek zerklik ihtiya doyumunu olan đrenciler daha fazla benlik saygısına ve daha az erteleme eđilimine sahiptirler.

Bulgular aynı zamanda, benlik saygısı yoluyla yeterlilik ihtiya doyumunu ve depresyon arasında negatif dolaylı bir iliřki olduđunu gstermiřtir. Bylece, đrenciler daha fazla benlik saygısına sahip oldukları zaman; daha fazla yeterlilik ihtiya doyumunu, daha az depresyon ile iliřkilendirilmiřtir. Ayrıca, hem depresyon hem de benlik saygısı yoluyla z-kontrol ile ilgili yeterlilik ihtiya doyumunu alakalı bulunmuřtur. Bu bulgu, đrencilerin daha az depresyon ve daha fazla benlik saygısı duyduklarında, daha fazla yeterlilik ihtiya doyumunun, daha fazla z-kontrol ile iliřkili olduđunu gstermiřtir.

Dahası, yeterlilik ihtiyacı doyumunun, Őu drt yol zerinden erteleme davranıŐı ile negatif iliŐkili olduĐu bulunmuŐtur: 1) CNS → depresyon → erteleme, 2) CNS → depresyon → z-kontrol → erteleme, 3) CNS → benlik saygısı → z-kontrol → erteleme, 4) CNS → z-kontrol → erteleme. Hipotezler doĐrulanmıŐtır. DiĐer bir deyiŐle, daha fazla yeterlilik ihtiyacı doyumunu, Đrencilerin 1) daha az depresif olmaları 2) daha az depresif ve daha fazla z-kontrol sahip olmaları 3) daha fazla benlik saygısı ve daha fazla z-kontrole sahip olmaları 4) daha fazla z-kontrole sahip olmaları durumlarında daha az erteleme eĐilimi ile iliŐkilendirilmiŐtir.

İliŐkililik ihtiyacı doyumunu ve endojen deĐiŐkenler arasında dolaylı iliŐkilerin hiŐbiri desteklenmemiŐtir. Őyle ki, benlik saygısı yoluyla iliŐkililik ihtiyacı doyumunu ile depresyon arasında anlamlı bir dolaylı iliŐki bulunmamıŐtır. Ayrıca, benlik saygısı ve/veya depresyon yoluyla iliŐkililik ihtiyacı doyumunu ile z-kontrol arasındaki dolaylı iliŐki desteklenmemiŐtir. Son olarak, iliŐkililik ihtiyacı doyumunu, ç aracı deĐiŐkenden hiŐbiri aracılıĐıyla erteleme eĐilimi ile iliŐkili deĐildir.

Genel olarak, bu araŐtırma, z-belirleme kuramına dayalı bir Őekilde temel psikolojik ihtiyaŐ doyumunu, benlik saygısı, depresyon, z-kontrol ve erteleme arasındaki nerilen iliŐkileri araŐtıran ilk ŐalıŐmadır. Bulgular erteleme konusundaki alanyazını geniŐletmektedir.

4.1 AraŐtırma ve Uygulamaya Ynelik neriler

Ertelemeyi karŐılanmamıŐ temel psikolojik ihtiyaŐlar iŐin telafi edici bir yol olarak dŐnmek, erteleme eĐilimindeki kiŐilerle ŐalıŐırken uygulayıcılar iŐin deĐerli bir araŐ olabilir. Bu ŐalıŐmanın ıŐıĐında; inatŐı, yorucu ve sinir bozucu bir erteleme deneyimi iŐin, ilk adım, ertelemenin o sırada kiŐinin kendi ihtiyaŐlarının doyumunu iŐin yapmayı bildiĐi ve yapabileceĐi en iyi yol –kendini

korumak için- olabileceğini bilmektir. Bu temelde, kişiye olumsuz etiketler (tembel, başarısız ve yararsız) kullanmadan ve saygıyla yaklaşmak (hiç kimse bir insana “kendini koruma” diyemez) danışanların ihtiyaçlarını anlamak için değerli araçlar olabilir. Kişi erteleme hayattaki önemini ve yerini anladıktan sonra, bunu yapmaya devam etmeyi veya buna direnmeyi seçebilir ve değişim süreciyle devam eder.

Bu çalışmadaki anlamlı bulgular, üç temel psikolojik ihtiyacın, özellikle de yeterlilik ihtiyacı doyumunun; benlik saygısı, depresyon ve öz-kontrol üzerindeki etkileriyle erteleme eğilimini önleyebileceğini göstermiştir. Bu sonuç, psikolojik yardım sağlayan danışma merkezleri, üniversite ve sağlık merkezleri gibi çeşitli ortamlarda çalışan uygulayıcılar tarafından dikkate alınmalıdır.

Ayrıca, bu çalışmada yüksek ilişkililik ihtiyacı doyumu ile yüksek erteleme düzeyi ilişkili bulunmuştur. Uygulayıcılar ayrıca, danışanların farkındalık ve ilişkililik ihtiyacı doyumunu anlamalarına yardımcı olmalı, bu ihtiyaçları kişisel önem sırasına göre düzenleme ve ihtiyaçlarını karşılayacak uygun yollar ve kaynaklar bulabilmeleri için kendilerini desteklemeyi öğrenmelerine yardımcı olmalıdır.

Bu doğrultuda, üniversite psikolojik danışma merkezleri, öğrenciler için temel psikolojik ihtiyaçlar farkındalık grupları gibi önleyici faaliyetlerin düzenlenmesinde, bu çalışmanın bulgularını dikkate alabilir. Öğrenciler öncelikle bunları fark ederlerse, o zaman öğrencinin ihtiyaç duyduğu memnuniyet düzeyi, akademik görevleri ve kişisel bakım faaliyetleri ile ilgili diğer görevleri (örneğin yemek, uyku, temizlik), boş zamanlarını (örneğin, sosyalleşmek, televizyon izlemek) ve manevi faaliyetlerini düzenleme ve bunlara katılma konusunda olumlu etki sağlar. Bu sayede, tek bir görevle

olabildiğince tam bir şekilde meşgul olabilirler ve görevi tamamladıklarında geri çekilebilirler

4.2 Sonraki Çalışmalar için Öneriler

Araştırmanın deseni göz önünde bulundurulduğunda, bu çalışma korelasyonların test edildiği ve değişkenlerin yordayıcı rollerinin öz bildirim ölçütleriyle rapor edildiği korelasyonel bir çalışmadır. Sadece nicel araştırma yöntemleriyle bireylerin erteleme eğilimlerinin farklı deneyimlerini ölçmek zordur. Niteliksel ve karma yöntemlerle yapılan ileri araştırmalar, temel psikolojik ihtiyaçlar doyumu ile ilgili olarak erteleme eğiliminin doğasının anlaşılması için yararlı bir fırsat sağlayabilir. Boylamsal çalışmalar da yapılabilir.

Başka bir öneri de örnekleme ilişkin olabilir. Bu çalışmada, Ankara'da bir özel üniversitedeki lisans öğrencilerinin katılımı sağlanmıştır. Gelecekte, telafi edici bir yönelim olarak erteleme deneyiminin lise öğrencileri, yüksek lisans öğrencileri ve yetişkinler gibi çeşitli popülasyonlarda incelenmesi gerekmektedir.

Bu çalışma, ihtiyaca dayalı bir kuramsal çerçeve içerisinde erteleme araştırması yapma girişimi olan bir ön çalışmadır. Şüphesiz ki, bireylerin erteleme eğilimlerini etkileyebilecek faktörler, bu çalışmada kavramsallaştırılmış ve araştırılmış olanlarla sınırlı değildir. İhtiyaç temelli yaklaşımların esnekliği araştırmacılara, erteleme deneyimindeki bireysel farklılıkları açıklayabilecek birçok faktörü inceleme fırsatı sunabilir.

Son olarak, ÖBK yaklaşımının erteleme konusundaki etkilerinin etkililiğini görebilmek için, erteleme müdahalesi programlarının yapılmasını öneren çalışmaların yapılması gerekmektedir. Bunun için araştırmacıların, yapının

ayrıntılı yönlerini açıklayabilecek ihtiyaç temelli bir yaklaşımda erteleme ile ilgili daha fazla araştırma yapmaları gerekmektedir.

K. TEZ FOTOKOPİSİ İZİN FORMU

ENSTİTÜ

- Fen Bilimleri Enstitüsü
- Sosyal Bilimler Enstitüsü
- Uygulamalı Matematik Enstitüsü
- Enformatik Enstitüsü
- Deniz Bilimleri Enstitüsü

YAZARIN

Soyadı : SERHATOĞLU

Adı : SEVGİ

Bölümü : EĞİTİM BİLİMLERİ – PSİKOLOJİK DANIŞMANLIK VE REHBERLİK

TEZİN ADI (İngilizce) : PROCRASTINATION: TESTING A SELF-DETERMINATION THEORY-BASED MODEL

TEZİN TÜRÜ : Yüksek Lisans Doktora

1. Tezimin tamamından kaynak gösterilmek şartıyla fotokopi alınabilir.
2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir.
3. Tezimden bir bir (1) yıl süreyle fotokopi alınamaz.

TEZİN KÜTÜPHANEYE TESLİM TARİHİ: