Art of Delay: How Problem-Solving Affects the Relationship Between Negative Urgency and Procrastination

by

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Koç University

Graduate School of Social Sciences and Humanities

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To Damla and my family

ABSTRACT

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Master of Arts in Clinical Psychology

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Procrastination is a form of self-regulatory failure characterized by delaying work, leading to loss of time, and resulting in psychological distress, which is intolerable for people with higher negative urgency (NU). NU is a component of the urgency-premeditation-perseverance-sensation seeking (UPPS) model of impulsivity and can be defined as the tendency to act rashly and impulsively while experiencing negative emotions to seek immediate relief. These individuals may employ problem-solving strategies when faced with negative emotions that surpass their low tolerance level. Moreover, negative problem orientation (NPO) shapes individuals' perspectives on negative emotion-inducing problems and their approach to addressing them. The present study aimed to investigate the relationships between procrastination, NU, NPO, and problem-solving styles while controlling for age, anxiety, and depression. It was hypothesized that negative urgency would be associated with procrastination and the problem-solving styles of individuals mediating this association. Additionally, NPO was expected to moderate the relationships of NU with other study variables. 410 participants in their emerging adulthood stage (aged between 18 and 29; M = 22.04, SD = 2.75) completed an online questionnaire including measures for NU, social problem-solving dimensions, procrastination, depression, and anxiety. Results showed that while controlling for age, depression, and anxiety, individuals with higher NU procrastinated more, and all problem-solving styles mediated this relationship. On the other hand, NPO only moderated the relationship between NU and rational problem-solving style (RPS). These findings suggest a connection between NU and procrastination, and people with NU are more prone to procrastinate and tend to employ maladaptive problem-solving styles to solve their problems.

Keywords: procrastination, negative urgency, impulsivity, social problem-solving, problem orientation, problem-solving styles, emerging adulthood

ÖZETÇE

Erteleme ve Sıkışıklık: Bu İlişkideki Olumsuz Sorun Yöneliminin Düzenleyici Rolü ve Sorun Çözme Tarzlarının Aracı Rolleri

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Erteleme, işleri ertelemeye, zaman kaybına ve psikolojik sıkıntıya neden olan bir kendilik düzenlemesi başarısızlığı türüdür ve sıkışıklığı yüksek kişiler için dayanılmaz bir sıkıntıya neden olur. Sıkışıklık, sıkışıklık-tasarlamama-sebatsızlık-heyecan arayışı (UPPS) dürtüsellik modelinin bileşenlerinden biridir ve olumsuz duygular hissedince aceleyle düşünmeden çeşitli davranışlarda bulunarak rahatlamaya çalışmak olarak tanımlanabilir. Bu kişiler hali hazırda düşük olumsuz duygu tahammül sınırlarını aşan durumlar için çeşitli sorun çözme tarzları kullanabilir. Dahası olumsuz sorun yönelimi bireylerin negatif duygu uyandıran sorunlara yönelik bakış açılarını ve bunlarla başa çıkma tarzlarını şekillendirir. Bu çalışma, yaşı, kaygıyı ve depresyonu kontrol ederken ertelemenin, sıkışıklık, olumsuz sorun yönelimi ve sorun çözme tarzları arasındaki ilişkileri araştırmayı amaçlamaktadır. Sıkışıklığın ertelemeyle ilişkili çıkacağı ve bireylerin sorun çözme tarzlarının bu ilişkiye aracılık edeceği hipotez edilmiştir. Ek olarak, olumsuz sorun yöneliminin sıkışıklık ve çalışmadaki diğer değişkenler arasındaki ilişkide düzenleyici rolü üstleneceği beklenmektedir. Beliren yetişkinlik dönemi içindeki 18-29 yaşları (M = 22.04, SS = 2.75) arasında bulunan 410 katılımcı, içerisinde sıkışıklık, sosyal sorun çözme boyutları, erteleme, depresyon ve kaygı ölçekleri bulunan bir çevrimiçi anketi tamamlamıştır. Sonuçlar, yaşı, depresyonu ve kaygıyı kontrol ederken yüksek sıkışıklığa sahip bireylerin daha fazla erteleme davranışlarında bulunduğunu ve bütün sorun çözme tarzlarının bu ilişkiye aracılık ettiğini göstermiştir. Öte yandan, olumsuz sorun yönelimi yalnızca sıkışıklık ile akılcı sorun çözme tarzı arasındaki ilişkide düzenleyici rolü üstlenmiştir. Bu bulgular, sıkışıklık hissini yoğun yaşayan insanların daha sık erteleme davranışlarında bulunduğunu ve işlevsel olmayan sorun çözme tarzlarını kullandıklarını göstermektedir.

Anahtar Kelimeler: erteleme, sıkışıklık, dürtüsellik, sosyal sorun çözme, sorun yönelimi, sorun çözme tarzları, beliren yetişkinlik

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

APS	Avoidant Problem Solving Style
GAD-7	Generalized Anxiety Disorder-7
ICS	Impulsive/Careless Problem Solving Style
NPO	Negative Problem Orientation
NU	Negative Urgency
OPS	Overall Problem Solving Score
PHQ-9	Patient Health Questionnaire-9
PPO	Positive Problem Orientation
PPS	Pure Procrastination Scale
PST	Problem Solving Therapy
RPS	Rational Problem Solving Style
SPSI-R	Social Problem Solving Inventory-Revised
UPPS	Urgency-Premeditation-Perseverance-Sensation Seeking
UPPS-P	UPPS-P Impulsive Behavior Scale

Chapter 1:
INTRODUCTION

Procrastination refers to voluntarily and irrationally delaying starting or continuing an unfinished task and initiating actions that prevent the individual from reaching their goal (Klingsieck, 2013; Steel, 2007; Zhang et al., 2019). Procrastination is a critical modern-day problem associated with devastating outcomes, such as getting fired from work or low grades in school (Day et al., 2000; Kim et al., 2017b). Due to its destructive consequences, procrastination can lead to highly stressful situations, which, in the end, can result in both physical and mental health problems.

There are multiple defined procrastination types in the literature. However, the definition of these types mostly depends on the setting where procrastination occurs. For instance, “academic procrastination” is extremely common among college students (Ellis & Knaus, 1977; Senécal et al., 1995), and up to 70% of university students consider themselves procrastinators (Schouwenburg et al., 2004). This form of procrastination can be defined as putting off academic tasks and eventually experiencing intense anxiety associated with the procrastination behavior (Rothblum et al., 1986). For example, a student who has to complete an assignment may initiate a series of task-irrelevant actions, such as making coffee or cleaning the room, that prevent them from studying. These actions may relieve stress and anxiety experienced by the student in the short term. However, in the long term, submitting the assignment or submitting an incomplete one can have serious consequences, such as low academic performance (Hensley, 2014; Karatas, 2015; Kim & Seo, 2015) and psychological distress (Constantin et al., 2018). Also, wasting time can cause severe anxiety as the deadline approaches (Maule et al., 2000). Procrastination has been extensively studied

in the academic domain due to its definition, consequences, and high prevalence rates, reaching up to 95% (Kim & Seo, 2015; Van Eerde, 2003).

According to Veresova (2013), procrastination can sometimes act as a coping mechanism. Coping mechanisms aim to remove the perceived stress, which is the cause of impulsive actions for people with greater negative urgency. However, coping mechanisms can be adaptive or maladaptive depending on their positive or negative effects on mental health and are described as cognitive and behavioral responses to a present threat (Tamres et al., 2002). Procrastination can be considered a maladaptive coping strategy when considering its short- and long-term outcomes. Furthermore, procrastinators report using more maladaptive coping strategies such as avoidance (Verešová, 2013), ruminative thinking (Flett et al., 2012), and self-blame (Sirois & Kitner, 2015) more frequently, which leads to greater perceived stress.

The literature has often demonstrated the negative effect of procrastination on mental health (Beswick et al., 1988; Constantin et al., 2018; Dardara & Al-Makhalid, 2022; Johansson et al., 2023; Tice and Baumeister, 1997). For example, procrastinators are more likely to experience depression and anxiety symptoms (Constantin et al., 2018; Dardara & Al-Makhalid, 2022; Johansson et al., 2023). Moreover, Tice and Baumeister (1997) found that people who procrastinate more frequently experience higher stress levels and poorer physical health. Furthermore, procrastination may also be positively associated with depression and anxiety due to its adverse impact on academic performance (Beswick et al., 1988).

Procrastination is linked to multiple personality traits and characteristics in addition to mental health problems (Schouwenburg & Lay, 1995). Literature has found negative correlations between procrastination and conscientiousness (Karatas, 2015; Lay, 1997) and agreeableness (Kim et al., 2017b), as well as positive correlations with

neuroticism (Kim et al., 2017b). However, there is an inconsistency in the literature regarding the relationship between procrastination and extroversion (Karatas, 2015; Zhou, 2020). Finally, individuals with higher self-esteem are less likely to procrastinate (Saleem & Rafique, 2012; Steel et al., 2001).

Overall, the relationships between procrastination and mental health, as well as various personality traits and characteristics, highlight the importance of examining it while focusing on potential mediators and moderators. Furthermore, procrastination may have relationships with factors such as negative urgency and dimensions of social problem-solving. Examining this would be helpful for a better understanding of procrastination, further creating or improving possible intervention methods, especially for people who cannot tolerate stress.

1.1 Negative Urgency

Impulsivity can be broadly defined as acting in a rash, inappropriate, unplanned, or risky way to the situation without adequate thought for the action or its consequences and usually ending in an undesirable situation (Adams et al., 2012; Daruna & Barnes, 1993; DeYoung & Rueter, 2010). According to Whiteside and Lynam's (2001) Urgency-Premeditation-Perseverance-Sensation seeking (UPPS) model, there are four components of impulsivity that form the model's name. "Lack of premeditation" is the failure to consider the consequences of an action before acting on it. "Lack of perseverance" refers to not being able to stay focused on a difficult task and showing a tendency to quit even after the first setback. "Sensation-seeking" is seeking and enjoying novel activities even if these activities are dangerous (Whiteside & Lynam, 2001). Finally, negative urgency (NU) can be defined as acting rashly and impulsively

while experiencing negative emotions with the aim of obtaining a sudden relief from the negative emotions (Cyders & Smith, 2008).

The initial studies focused on NU as a risk factor that is more specifically associated with externalizing disorders (Settles et al., 2012). In support of this view, NU was found to be related to binge eating as well as higher drug and alcohol consumption (Coskunpinar et al., 2013; Johnson et al., 2018; King et al., 2018). Furthermore, in their meta-analysis, Berg et al. (2015) showed that people with high NU experience more depressive and anxiety symptoms. Consistent with this, more recent studies also indicate a significant positive association between NU and depression and anxiety (Altan-Atalay et al., 2020; Johnson et al., 2018; King et al., 2022; Pang et al., 2014; Savvidou et al., 2017). Additionally, Pawluk et al. (2017) found that NU and impulsive/careless problem-solving style have a similar purpose for individuals with generalized anxiety disorder. Both may depend on the individual's emotional state and increase when the individual experiences higher anxious arousal.

NU is one of the most important predictors of substance and alcohol use disorders (Kaiser et al., 2012; Smith & Cyders, 2016), as well as risky sexual behavior in emerging adulthood (Deckman & DeWall, 2011). For people with high NU, negative emotions are perceived as so unbearable that they feel like they need to do something to get rid of these emotions urgently. In other words, they try to relieve their negative emotions by acting rashly, which can lead to externalizing behaviors such as alcohol consumption or avoidance behaviors (King et al., 2018).

Multiple studies have identified several mediators and moderators between NU and externalizing disorders. To begin with, Adams et al. (2012) demonstrated that coping and enhancement motives mediated the relationship between NU and

problematic drinking, suggesting that the drinking motives of individuals with high NU may play a pivotal role in developing problematic drinking behavior.

Borges et al. (2017) discovered that changes in negative affect mediated the association between NU and distress tolerance, implying that people high on NU experience more significant fluctuations in negative affect, reducing their capacity to tolerate stress. Another study revealed that non-suicidal self-injury (NSSI) fully mediated the relationship between NU and suicidal behavior (Anestis et al., 2014). This finding indicates that individuals high in NU are more likely to engage in self-injurious behaviors, and these experiences can eventually lead to suicidal behaviors.

In another study using moderated mediation, Racine and Martin (2017a) found that eating expectancies mediated the association between NU and dysregulated eating. This indirect relationship depended on the level of each eating disorder risk factor. The results indicate that individuals with NU who form high-risk eating expectancies, along with sociocultural pressures for an ideal thin body image, have the highest risk of developing dysregulated eating.

Fisher et al. (2004) found that the relationship between NU and binge eating was moderated by eating expectancies. They also identified a comparable moderating effect of alcohol expectancies between the association of NU and problematic alcohol use. These findings show that certain variables, such as disorder-specific expectancies, can mediate (Racine & Martin, 2017a) and moderate (Fisher et al., 2004) the relationships of NU with externalizing disorders. Lastly, Racine et al. (2017b) examined several eating disorder-specific risk factors as moderators between NU and binge eating disorders. They identified that thin-ideal internalization, appearance pressures, and body dissatisfaction moderated this association.

Impulsivity is closely tied to procrastination at genetic (Gustavson et al., 2014, 2015) and behavioral levels (Wypych et al., 2018). Notably, both are moderately heritable, and genetic influences on procrastination and impulsive behaviors intersect, indicating a genetic connection between them (Gustavson et al., 2014). The relationship between impulsive tendencies and reduced cognitive control was observed in neuropsychological studies (Holmes et al., 2016). Primarily, both procrastinators and negatively urgent individuals experience problems with inhibition, which can be referred to as the mental process that restrains, suppresses, or changes an individual's thoughts, emotions, or behaviors and an essential aspect of self-regulation and cognitive control (Chester et al., 2016; Gustavson et al., 2015; Heatherton, 2011; Rebetez et al., 2016).

Wypych et al. (2018) tested the relationship between NU and procrastination, revealing that impulsively removing negative emotions can indirectly result in increased student procrastination through suppression, defined as trying to hide or reduce current emotions. This relationship was not observed with the other dimensions of impulsivity, and they concluded that NU should be further investigated in terms of its relationship with procrastination (Wypych et al., 2018). In line with this, Rebetez et al. (2018) found that high urgency (both positive and negative) was associated with higher procrastination.

1.2 Social Problem Solving

Problem-solving is a process during which a person makes a decision and takes action to remove themselves from an uncomfortable situation (Eskin, 2012). D'Zurilla et al. (2004) suggested the social problem-solving process model that is composed of positive (PPO) and negative problem orientations (NPO) and three problem-solving

styles: rational problem-solving (RPS), impulsive/careless problem-solving (ICS), and avoidant problem-solving (APS). According to the social problem solving model, an individual's problem-solving ability depends on these five dimensions and how often they employ them daily (D'Zurilla et al., 2004).

Problem orientation refers to a set of nearly stable cognitive schemas, emotional reactions, behavioral attitudes towards problems, and the ability to cope with them (D'Zurilla et al., 2004; Eskin, 2012; Nezu, 2004). On the other hand, problem-solving styles are mainly cognitive and behavioral activities that people engage in when encountering problems in their daily lives (Nezu, 2004).

Positive problem orientation (PPO) can be described as the tendency to view problems as challenges instead of obstacles, being optimistic about these challenges being solvable, and being confident in the individual's ability to overcome them (D'Zurilla et al., 2004; Eskin, 2012; Nezu, 2004). People with higher PPO are more likely to display their skills and efforts to solve problems due to higher motivation and positive affect than negative problem orientation (NPO) (Nezu, 2004).

PPO is a protective factor for psychopathology as it involves processes and skills to manage stress-inducing problematic situations (Wilson et al., 2011). However, PPO has less robust associations with depression and anxiety compared to NPO (Anderson et al., 2011; Chang & D'Zurilla, 1996; Chang et al., 2009; Haugh, 2006), which may mean that targeting the factors creating higher NPO is more crucial in terms of psychopathology symptoms.

1.2.1 Negative Problem Orientation (NPO)

Negative problem orientation (NPO) refers to a set of attitudes and beliefs that involve viewing problems as threats, expecting problems to be unsolvable, doubting the

ability to solve problems, and becoming distressed when encountering problems (Nezu, 2004). According to D'Zurilla et al. (2004), Eskin (2012), and Nezu & Nezu (2001), people with NPO have specific shared characteristics. People with a higher NPO can be demoralized or avoid a challenging situation instead of actively trying to solve it. They cannot detect the actual source of the problems, which impedes their ability to solve them. They may either not see the problems at all or simply ignore them, increasing the number of problems they need to solve in the future, which increases stress and negatively impacts the psychological well-being of individuals. Furthermore, instead of seeing problems as opportunities for self-improvement, they get frustrated when they encounter problems. They see problems as threats, causing them to try to escape from them instead of actively solving them. To them, problems usually seem more complex than they are. They may also not trust their abilities to solve the problems (Eskin, 2012).

Due to these characteristics, NPO is perceived as a dysfunctional approach to problem situations, and people with greater NPO experience higher levels of depression and anxiety compared to people with PPO (Eskin, 2012; Grant et al., 2006; Söğüt et al., 2022). Furthermore, symptoms of depression and anxiety have the strongest associations with NPO compared to the other four dimensions of the social problem-solving model (Chang & D'Zurilla, 1996; Chang et al., 2009; Haugh, 2006). Moreover, Anderson et al. (2011) showed that NPO and overall problem-solving scores not only simultaneously predict depression at the time but also have a significant effect on depressive symptoms in the future.

Some studies have explored NPO's role as a moderator. To begin with, Londahl et al. (2005) identified NPO as a significant moderator among other social problem-solving dimensions, specifically in interpersonal conflict and internalizing symptoms. Notably, higher levels of NPO intensified the impact of conflicts on anxiety symptoms

between romantic partners. Secondly, Bell and D'Zurilla (2009) investigated the potential mediator and moderator roles of social problem-solving dimensions between daily stress and internalizing and externalizing symptoms. They found that in men, higher levels of NPO were associated with vulnerability to daily stress in producing externalizing symptoms such as aggressive and intrusive behaviors. However, this effect was not observed in women, as problem-solving styles had a more robust mediating effect on them (Bell & D'Zurilla, 2009).

People with higher NPO mainly use two maladaptive problem-solving styles, avoidant problem-solving (APS) and impulsive/careless problem-solving (ICS), while decreasing the use of rational problem-solving (RPS) style to solve their problems (Eskin, 2012).

1.2.2 Avoidant Problem Solving (APS)

Avoidant problem solving (APS) is a maladaptive problem-solving style involving procrastination, passivity, and depending on others to solve problems (Nezu, 2004). People who rely on APS to solve problems neglect the problem by avoiding it for as long as possible or relying on others to solve their problems. This may be due to the fact that they may think their problem-solving skills are insufficient to solve the problems (Eskin, 2012). Therefore, it appears pointless for them to try to solve the problem. Instead, they wait for the problem to solve itself, frequently leading to an unsuccessful problem resolution (Nezu, 2004).

APS is highly related to psychological distress. For instance, adolescents high on APS, together with NPO, experience higher levels of depression and suicidality (Becker-Weidman et al., 2010). Furthermore, children who use APS in social problem situations experience higher levels of anxiety (Wilson & Hughes, 2011).

1.2.3 Impulsive/Careless Problem Solving (ICS)

Impulsive/careless problem solving (ICS) is the second maladaptive problem-solving style involving impulsive, careless, and hasty problem solutions (Nezu, 2004). Individuals with ICS try to solve their problems in a reckless manner, such as quitting their jobs as an impulsive solution when encountering a stressful situation at the workplace, instead of trying to remove the source of the stress, which would be the ideal method of overcoming this problem. In other words, rather than following a systematic approach to solving problems, they tend to use the first solution that comes to their minds (Nezu & Nezu, 2001). These individuals have impulsive tendencies, meaning they act without thinking about the consequences of their actions, show underdeveloped problem-solving skills, and are likely to end up with a different set of problems after resolving the initial one, and the solution may even become the problem itself (Şanal et al., 2019). Thus, this behavioral habit usually results in undesirable outcomes as they fail to evaluate alternative and better ways to solve problems (D'Zurilla et al., 2004).

ICS has similar depression and anxiety associations with NPO and APS (Becker-Weidman et al., 2010; Belzer et al., 2002; D'Zurilla et al., 2002; D'Zurilla et al., 2004; Eskin, 2012). This is because daily life events that cause stress require resolutions by implementing proper solutions so that individuals are relieved from the stress. People with maladaptive problem-solving styles are not able to provide these solutions, and the accumulation of stress from these problems causes psychological distress (Nezu, 2004).

Additionally, due to the nature of ICS, which is solving the problem without thinking about its long-term effects, the psychological effects of this style may even appear after some time, as Hasegawa et al. (2015) found that ICS prospectively

predicted depressive symptoms six months later. This may occur as the impacts of impulsive solutions on mental health may require some time to manifest.

1.2.4 Rational Problem Solving (RPS)

Rational problem solving (RPS) is the only adaptive problem-solving style operationalized by D'Zurilla (2004) that people with higher PPO use (Eskin, 2012). People with RPS solve their problems in a systematic way. Notably, they first define and formulate the problem accurately, generate multiple possible solutions, and evaluate each to decide on the most appropriate one for the problem. Then, they implement the solution, assess the final situation, and see how far they have reached their goal state (Nezu, 2004; Eskin, 2012; Şanal et al., 2019).

Since RPS is the optimal approach to solving problems, it is the only style without a positive relationship with depression and anxiety (Becker-Weidman et al., 2010; Belzer et al., 2002; D'Zurilla et al., 1998; Eskin, 2012; Haugh, 2006; Kant et al., 1997). Notably, Belzer et al. (2002) found that RPS is the only style that is not related to worry together with anxiety. Furthermore, Becker-Weidman et al. (2010) showed that RPS is not associated with depression severity.

1.3 Emerging Adulthood

Emerging adulthood is a developmental stage spanning between 18 to 29 years old ages (Arnett, 2014). Individuals in this stage go through identity exploration (Galambos et al., 2006). During this period, people experience significant changes in their psychological well-being due to increased emotion regulation capacity (Schulenberg et al., 2003), self-esteem, self-efficacy, and social support (Schulenberg et

al., 2005). They also get new roles in life due to employment or marriage (Galambos et al., 2006).

Procrastination is even more prevalent in emerging adults (Beutel et al., 2016; Schouwenburg et al., 2004). Furthermore, self-esteem increases (Saleem & Rafique, 2012), and social problem solving ability improves, resulting in higher overall problem-solving scores as people mature throughout this age period (Cornelius & Caspi, 1987; D'Zurilla et al., 1998; D'Zurilla et al., 2003). Finally, impulsivity and NU stabilize during adolescence and decrease with age (Littlefield et al., 2016; Moustafa et al., 2017). Thus, the implications of this study would be best suited to the proposed age group. Therefore, it is particularly important to focus on individuals in their emerging adulthood (Arnett, 2000, 2007, 2014).

1.4 The current study

The aim of this study is to see the relationship between NU, problem-solving styles, NPO, and procrastination in a group of emerging adults. Although the relationship between the social problem-solving model, NU, and procrastination has never been studied before, we expect that people with higher NU would feel the urge to remove negative feelings as fast as possible and may consider using procrastination to relieve their tension due to these negative feelings. We anticipate all problem-solving styles to mediate the association between NU and procrastination. However, we expect NU to have positive relationships with APS and ICS but a negative relationship with RPS. Depending on the maladaptive problem-solving style utilized, people may find a swift solution to solve their problem or evade it to diminish the stress as they may lack confidence in their abilities (Ferrari et al., 1995). On the contrary, rational problem solvers would be aware of their problems and use functional problem-solving strategies

to solve them. Consequently, they will strive to complete their tasks to circumvent procrastination, recognizing that completing them would be the most effective solution.

King et al. (2018) say that people with high NU will likely use impulsive behaviors to regulate their negative emotions. They do not have enough resources to deal with the problem, which further increases the stress experienced by the individual, reminding us how people with higher NPO deal with problems. Furthermore, since NPO is a problem orientation that changes how individuals experience a stress-inducing problem, there is good reason to expect the association of NU with ICS, APS, RPS, and procrastination to change depending on the individual's NPO levels. That is, as people with higher NPO see problems as obstacles, they experience a higher amount of stress coupled with increased negative emotions when they encounter a problem.

When people with higher NU also have a greater NPO, they may use dysfunctional problem-solving styles and procrastinate more frequently. However, when NPO is lower, people may not use maladaptive problem-solving styles when they feel the urge to remove their negative emotions, making NPO a moderator between negative urgency and problem-solving techniques. Instead, they can rely on rational problem-solving to overcome the distress. Despite these, the literature lacks information regarding the relationship between social problem-solving, NU, and procrastination.

Overall, this study aims to investigate the mediating roles of problem-solving styles between NU and procrastination. Furthermore, the current study also aims to examine the moderator role of NPO in the relationship between NU and all three problem-solving styles while controlling for levels of anxiety and depression. Controlling for anxiety and depression is crucial due to NU being a transdiagnostic risk factor associated with both depression and anxiety (Altan-Atalay et al., 2020; Johnson et al., 2018; King et al., 2022; Pang et al., 2014; Savvidou et al., 2017). This also applies

to social problem-solving dimensions (Becker-Weidman et al., 2010; Belzer et al., 2002; D'Zurilla et al., 2002; D'Zurilla et al., 2004; Eskin, 2012; Grant et al., 2006; Söğüt et al., 2022).

Accordingly, the hypotheses are;

(1) There will be a significant positive association between NU and procrastination.

(2) The relationship between NU and procrastination will be mediated by problem-solving styles RPS (2a), ICS (2b), and APS (2c). Dysfunctional problem-solving styles will be positively associated with negative urgency and procrastination, but the functional problem-solving style, RPS, will be negatively associated with the abovementioned variables.

(3) NPO will moderate the relationship between NU and problem-solving styles, RPS (3a), ICS (3b), and APS (3c). NPO will augment this relationship for dysfunctional problem-solving styles ICS and APS. On the other hand, the opposite is expected for RPS, meaning that NPO will lessen the effect of NU on RPS.

(4) NPO will moderate the relationship between NU and procrastination. In other words, this relationship will change depending on the NPO levels. Notably, the effect of NU on procrastination will increase as NPO increases.

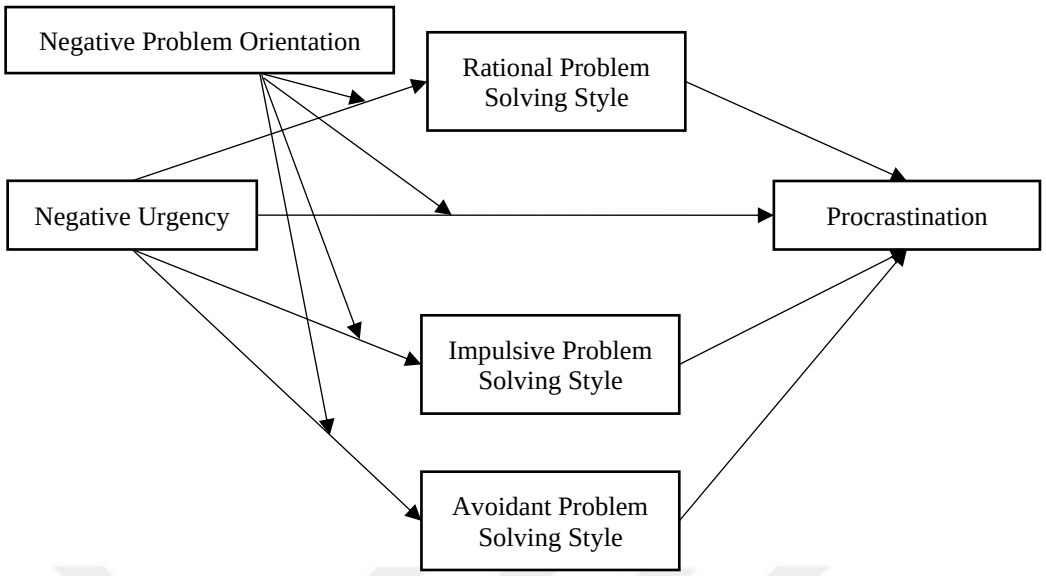

Figure 1.1: The proposed model between negative urgency, negative problem orientation, rational problem solving style, impulsive problem solving style, avoidant problem solving style and procrastination.

Chapter 2:
METHOD

2.1 Participants

A total of 586 participants completed the online questionnaire on Qualtrics, an online survey platform. 162 participants were removed from the data due to the reasons: (1) not being between 18-29 years of age, which is the range for emerging adulthood (Arnett, 2014), (2) not completing all the questions in the survey, (3) completing the questionnaire under 10 minutes which may mean that participants either did not read all the questions, or reflect on the question enough to give a proper answer. Finally, 14 univariate outliers were removed, leaving the data with 410 participants aged between 18 and 29 (M = 22.04, SD = 2.75). Details of descriptive variables can be found in Table 2.1.

Table 2.1: Demographic information of the participants.

		Frequencies	Percentages
Sex	Female	309	75.4
	Male	96	23.4
	Other	4	1.0
	Not Shared	1	.2
Marital Status	Single	385	93.9
	Married	14	3.4
	Divorced	1	.2
	Other	10	2.4
Education Level	High School	244	59.5
	Bachelor	140	34.1
	Master	22	5.4
	Doctorate	4	1.0
Student	Yes	354	86.3
	No	56	13.7

	Low	27	6.6
	Low-Middle	49	12.0
Income	Middle	136	33.2
	Middle-High	164	40.0
	High	34	8.3

2.2 Measures

2.2.1 Demographic Form

Demographic form included age, gender, educational status, and psychiatric history, if there is any, which may interfere with other study variables. This information was obtained with open-ended questions from the participants except for gender and educational status, which were multiple choice questions.

2.2.2 UPPS-P Impulsive Behavior Scale

UPPS-P Impulsive Behavior Scale (UPPS-P, Whiteside & Lynam, 2001) is a 45-item scale created by combining existing well-established impulsivity scales with a factor analysis. It is a 4-point Likert-type scale, and responses range from 1 (Strongly disagree) to 4 (Strongly agree). It includes four subscales, which are (1) Negative Urgency, (2) Lack of Premeditation, (3) Lack of Perseverance, and (4) Sensation Seeking. It has good internal consistency, with its α scores ranging between 0.82 and 0.91 in different studies for its subscales (Whiteside & Lynam, 2001; Whiteside et al., 2005). Turkish versions of the 11 negative urgency questions (e.g., “When I am upset, I often act without thinking,” “Sometimes, when I feel bad, I can’t seem to stop what I am doing even though it is making me feel worse”) were delivered to the participants for the aims of this study. UPPS-P was translated into Turkish by Yargıç et al. (2011), and the NU subscale had good internal consistency (α = 0.802) and test-retest reliability.

2.2.3 Social Problem Solving Inventory-Revised

Social Problem Solving Inventory-Revised (SPSI-R) was developed by D'Zurilla et al. (2002). It includes five subscales: (1) Positive Problem Orientation (PPO, 5 items, e.g., "When I am faced with a difficult problem, I believe that I will be able to solve it on my own if I try hard enough," "Whenever I have a problem, I believe that it can be solved"), (2) Negative Problem Orientation (NPO, 10 items, e.g., "I get nervous and unsure of myself when I have to make an important decision," "I feel afraid when I have an important problem to solve"), (3) Rational Problem-Solving Style (RPS, 20 items, e.g., "After carrying out a solution to a problem, I try to evaluate as carefully as possible how much the situation has changed for the better," "When I have a decision to make, I take the time to try to predict the positive and negative consequences of each possible option before I act"), (4) Impulsive/Careless Problem-Solving Style (ICS, 10 items, e.g., "When making decisions, I go with my gut feeling without thinking too much about the consequences of each option," "When I am trying to solve a problem I go with the first good idea that comes to mind"), (5) Avoidant Problem-Solving Style (AS, 7 items, e.g., "When a problem happens in my life, I put off trying to solve it for as long as possible," "If I am faced with a difficult problem, I probably will not be able to solve it on my own no matter how hard I try"). It is a 52-item, 5-point Likert-type scale. Responses are scored between 0 and 4. An overall problem-solving score can also be computed in which higher scores indicate better problem-solving skills. SPSI-R has good psychometric properties (D'Zurilla et al., 2002) and was adapted to Turkish by Eskin and Aycan (2009). Internal consistency coefficients of the Turkish version ranged between 0.62 and 0.92, and test-retest reliability coefficients ranged between 0.60 and 0.84 (Eskin & Aycan, 2009).

2.2.4 Pure Procrastination Scale

Pure Procrastination Scale (PPS) is a 12-item scale that measures procrastination. It was created by Steel (2010) by combining the highest-loading items from three other commonly used procrastination scales: five items from the General Procrastination Scale (GPS; Lay, 1986), four items from the Adult Inventory of Procrastination (AIP; McCown & Johnson, 1989), and three items from the Decisional Procrastination Questionnaire (DPQ; Mann, 1982). PPS is a 5-point Likert scale, and responses are scored from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating more procrastination conducted by the participants. Steel (2010) reported that PPS has high internal consistency ($\alpha = 0.92$) and validity. Items of PPS include "even jobs that require little else except sitting down and doing them, I find that they seldom get done for days" and "I often find myself performing tasks that I had intended to do days before." PPS was adapted to Turkish by Balkis and Duru (2019) and has good internal consistency ($\alpha = 0.92$) and validity.

2.2.5 Patient Health Questionnaire-9

Patient Health Questionnaire-9 (PHQ-9) is a 9-item scale that measures depression. It was developed by Kroenke et al. (2001) based on the symptoms of depression in the Diagnostic Manual of Mental Disorders-IV (DSM-IV). It is a 4-point Likert-type scale, and responses are scored from 0 (not at all) to 3 (nearly every day). The total score is found by summing up the scores of each question, and higher scores indicate higher levels of depression. Some examples of the items of PHQ-9 include "Trouble concentrating on things, such as reading the newspaper or watching television" and "Moving or speaking so slowly that other people could have noticed or the opposite being so fidgety or restless that you have been moving around a lot more

than usual." The scale has good internal consistency (α = 0.89) and test-retest reliability (Kroenke et al., 2001). Turkish version of the scale has adequate test-retest and internal consistencies (Güleç et al., 2012; Sari et al., 2016).

2.2.6 Generalized Anxiety Disorder-7

Generalized Anxiety Disorder-7 (GAD-7), created by Spitzer et al. (2006), is a 7-item 4-point Likert-type questionnaire aimed to measure anxiety. Similar to PHQ-9, responses are rated 0 (not at all) to 3 (nearly every day), and the summation of scores shows participants' anxiety levels. Questions include "feeling nervous, anxious, or on the edge" and "feeling afraid as if something awful might happen." GAD-7 has satisfactory psychometric properties with good internal consistency (α = 0.92) and high test-retest reliability (Spitzer et al., 2006). The scale was adapted to Turkish by Konkan et al. (2013) with high internal consistency (α = 0.85) and validity.

2.3 Procedure

Before gathering data, ethical approval was obtained from the Koç University Ethics Committee. Then, a poster with the link to the study's Qualtrics page was published as a social media advertisement describing the study's aim, what was expected from participants, and how long it would take approximately to complete the survey. This Qualtrics link and study details were also made available in Koç University's subject pool for all psychology course students at Koç University.

The participants were recruited through social media advertisements (e.g., Instagram, Facebook, and Twitter) who did not receive any compensation and from Koç University's subject pool, mainly psychology majors who completed the questionnaire for additional course credit.

After clicking the link, participants were asked to accept the consent form to continue further, which describes additional study details. After accepting it, they were presented with the scales starting with the demographic form. It helped to determine if they were a suitable candidate for the study in case they had not paid attention to the warnings regarding suitability and gave information about the participants' backgrounds. Then, the remaining scales, UPPS-P, SPSI-R, PPS, GAD-7, and PHQ-9, were made available to the participants in a random order. It took approximately 15-20 minutes for participants to complete the survey. Data collection was completed in three months.

2.4 Data Analysis

The results were analyzed using the IBM SPSS Statistics version 28.0 for Windows. A Pearson correlation analysis was conducted between the variables, including NU, NPO, PPO, RPS, ICS, APS, PPS, GAD-7, PHQ-9, age, and overall problem-solving score (OPS), which was calculated with the combination of subscale scores of SPSI-R. Then, a bootstrapping method with 5000 bootstrap samples with a 95% confidence interval was used for the mediation analysis (PROCESS, Model 4, Hayes, 2018) to test the mediator effects of RPS, ICS, and APS between NU and procrastination. Finally, another bootstrapping method was used with the same 5000 bootstrap samples with a 95% confidence interval to test the moderation effect of NPO between NU and problem-solving styles (PROCESS, Model 8, Hayes, 2018). This test also enabled us to observe the moderation effect of NPO on the direct effect of NU on procrastination. In these analyses, participants' age, depression, and anxiety scores were used as covariates to eliminate the possible effects of these variables on outcomes.

Chapter 3:
RESULTS

3.1 Correlation Analysis Between All Variables

Beginning with the demographic variables, age was negatively correlated with RPS (r = -.107, p < .05), depression (r = -.14, p < .01), and anxiety (r = -.13, p < .01). The negative correlation between RPS and age was not expected, since people at a higher age shows overall better problem-solving skills (Cornelius & Caspi, 1987; D'Zurilla et al., 1998). Other than these, age had no other significant correlations with other variables. Another demographic variable, sex, only had a single significant correlation with NPO (r = -.109, p < .05).

Continuing with the independent variable, NU was positively correlated with NPO (r = .438, p < .001), ICS (r = 336, p < .001), APS (r = .345, p < .001), procrastination (r = .41, p < .001), depression (r = .374, p < .001) and finally anxiety (r = .374, p < .001). On the other hand, NU had a significant negative correlation with RPS (r = -.216, p < .001) and OPS (r = -.481, p < .001).

NPO was found to be significantly correlated with dysfunctional styles ICS (r = .25, p < .001), APS (r = .59, p < .001), and procrastination (r = 524, p < .001). NPO was almost negatively correlated with RPS (r = -.096, p = .051). This correlation was expected to be larger. The correlation between NPO and OPS was significant and negative (r = -.746, p < .001). NPO was also positively correlated with control variables depression (r = .433, p < .001) and anxiety (r = .472, p < .001).

As for problem-solving styles and their correlations with other variables, RPS was negatively correlated with dysfunctional problem-solving styles ICS (r = -.268, p < .001), APS (r = -.2, p < .001), and procrastination (r = -.243, p < .001). RPS was

positively correlated with OPS ($r = .576$, $p < .001$). Finally, the correlations between RPS and depression and anxiety had no statistical significance.

Dysfunctional problem-solving styles had similar results for correlations except for anxiety. ICS had a significant positive correlation with APS ($r = .437$, $p < .001$), procrastination ($r = .237$, $p < .001$), and depression ($r = .125$, $p < .05$). It had a negative significant correlation with OPS ($r = -.552$, $p < .001$). APS also had positive significant correlations with procrastination ($r = .66$, $p < .001$), and larger correlations with both depression ($r = .264$, $p < .001$), and anxiety ($r = .231$, $p < .001$) but negative correlation with OPS ($r = -.798$, $p < .001$).

Procrastination was positively correlated with depression ($r = .376$, $p < .001$) and anxiety ($r = .252$, $p < .001$). The correlation between procrastination and OPS was also significant and negative ($r = -.638$, $p < .001$).

As for control variables and their relationship between each other and OPS, depression scores were significantly correlated with anxiety ($r = .715$, $p < .001$) and OPS ($r = -.357$, $p < .001$). Finally, anxiety was also negatively correlated with OPS ($r = -.353$, $p < .001$).

Table 3.1: Correlations, internal consistencies, and measures of the spread of the variables.

Variable	Sex	Age	NU	NPO	RPS	ICS	APS	OPS	PPS	PHQ-9	GAD-7
Sex	-										
Age	-.014	-									
NU	.037	-.079	-								
NPO	-.109*	-.02	.438**	-							
RPS	.036	-.107*	-.216**	-.096	-						
ICS	.084	.019	.336**	.25**	-.268**	-					
APS	-.007	-.018	.345**	.59**	-.2**	.437**	-				
OPS	.053	-.024	-.481**	-.746**	.576**	-.552**	-.798**	-			
PPS	-.041	-.064	.413**	.524**	-.243**	.237**	.66**	-.638**	-		
PHQ9	.002	-.141**	.374**	.433**	-.073	.125*	.264**	-.357**	.376**	-	
GAD7	-.041	-.131**	.374**	.472**	-.071	.063	.231**	-.353**	.252**	.715**	-
Mean	1.27	22.04	24.43	20.50	47.93	10.31	10.00	12.30	34.03	9.28	7.96
SD	.51	2.75	5.66	9.27	13.41	6.08	6.03	2.65	10.57	5.34	5.20
Min	-	18	13	0	13	0	0	4.94	12	0	0
Max	-	29	40	40	80	27	27	18.90	60	26	21
α	-	-	.81	.92	.92	.78	.83	-	.92	.83	.90

Note. N = 410. *$p < .05$, **$p < .01$.

NU = Negative Urgency, NPO = Negative Problem Orientation, RPS = Rational Problem Solving Style, ICS = Impulsive Problem Solving Style, APS = Avoidant Problem Solving Style, OPS = Overall Problem Solving Score, PPS = Pure Procrastination Scale, PHQ-9 = Patient Health Questionnaire-9, GAD-7 = Generalized Anxiety Disorder-7, Min = Minimum, Max = Maximum

3.2 Mediation of Problem Solving Styles Between Negative Urgency and Procrastination

A parallel mediation analysis (PROCESS, Model 4, Hayes, 2018) was conducted to observe the mediator roles of RPS, ICS, and APS between NU and procrastination (Figure 3.1).

To begin with, the direct effect of NU on procrastination was significant and positive (β = .356, *SE* = .075, $p < .001$). The total indirect effect was also significant since the null of zero was not between lower-level confidence interval (LLCI) and upper-level confidence interval (ULCI) (β = .265, *SE* = .063, CI = [.143, .389]). This result means that problem-solving styles mediate the relationship between NU and procrastination, even when anxiety and depression scores are controlled. Accordingly, the total effect of NU on procrastination is also significant and positive (β = .621, *SE* = .088, $p < .001$), meaning that as NU gets higher, procrastination increases as well; hence, hypothesis 1 is accepted.

Continuing with the details of this result, the association between NU and RPS was significant (β = -.529, *SE* = .125, $p < .001$). Another significant association was found between RPS and procrastination (β = -.078, *SE* = .028, $p < .01$). Furthermore, the indirect effect of RPS is also significant (β = .041, *SE* = .019, CI = [.010, .083]). RPS significantly mediates the relationship between NU and procrastination, and as RPS increases, both NU and procrastination decrease, confirming hypothesis 2a.

The second mediator, ICS, was also found to be significantly associated with both NU (β = .380, *SE* = .055, $p < .001$) and procrastination (β = -.246, *SE* = .069, $p < .001$). However, the negative effect between ICS and procrastination was not expected. The indirect effect of ICS is significant and negative as it is the product of the

coefficients mentioned above (β = -.094, *SE* = .29, CI = [-.153, -.042]). This result showed that ICS is another significant mediator between NU and procrastination, supporting hypothesis 2b. However, ICS has an unexpected suppressive effect on procrastination, as the direct effect of NU and the mediated effect of ICS have opposite signs (MacKinnon et al., 2000).

Last mediator APS had significant associations with NU (β = .303, *SE* = .054, p < .001) and procrastination (β = 1.049, *SE* = .069, p < .001). Finally, APS also mediated the relationship between NU and procrastination (β = .317, *SE* = .062, CI = [.196, .443]). As APS increases, both NU and procrastination increase, and this result confirms hypothesis 2c.

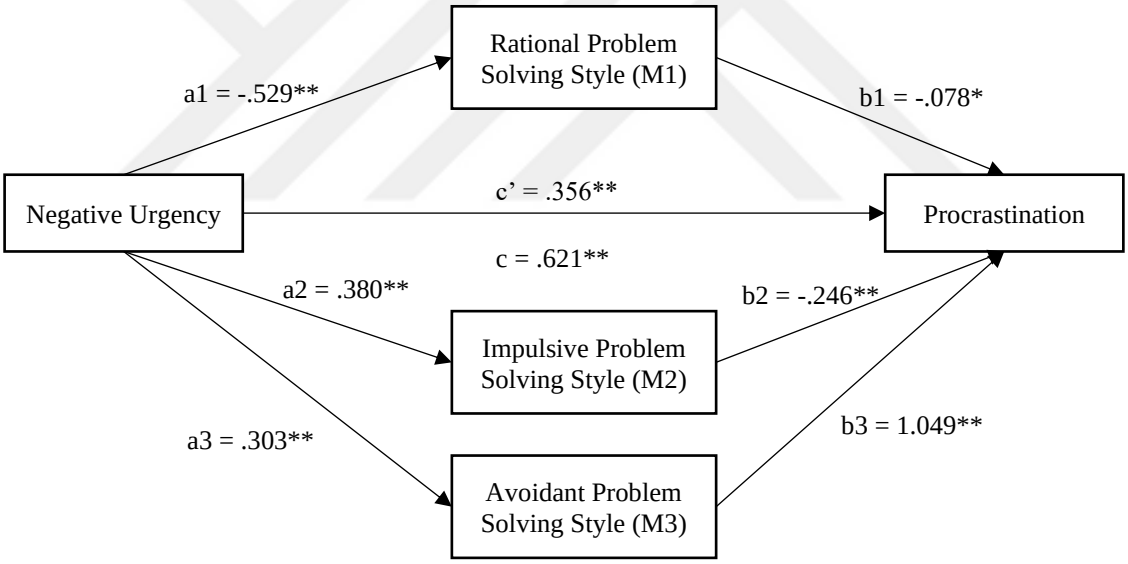

Figure 3.1: The parallel mediation model between negative urgency and procrastination.

Note. *p < .01, **p < .001

3.3 Moderation of Negative Problem Orientation Between Negative Urgency and Problem Solving Styles

A moderated mediation analysis (PROCESS, Model 8, Hayes, 2018) was conducted to examine the moderation role of NPO in the association between NU and problem-solving styles. This model also used age, PHQ-9, and GAD-7 scores as control variables. Furthermore, NU and NPO were centered prior to the analysis. This model also tests the moderator effect of NPO on the direct effect of NU on procrastination (Hayes, 2018).

Starting with the direct effects of the variables, NU (β = .318, *SE* = .076, p < .001), NPO (β = .142, *SE* = .054, p < .01), RPS (β = -.082, *SE* = .029, p < .01), ICS (β = -.24, *SE* = .069, p < .001), APS (β = .949, *SE* = .080, p < .001) all had significant direct effects on procrastination.

Table 3.2: Results of the moderation analysis.

	R^2	*B*	*SE*	*t*	*p*
Outcome Variable: Rational Problem Solving Style (RPS)					
NU		-.550	.131	-4.209	< .001*
NPO		-.012	.084	-.145	.885
NU x NPO	.013	.029	.012	2.397	.017*
Age		-.608	.237	-2.565	.011*
Depression		.013	.177	.074	.941
Anxiety		-.023	.184	-.127	.899
Outcome Variable: Impulsive/Careless Problem Solving Style (ICS)					
NU		.327	.057	5.741	< .001*
NPO		.111	.037	3.040	.003*
NU x NPO	.000	.000	.005	.079	.938
Age		.073	.103	.708	.480
Depression		.075	.078	.978	.329
Anxiety		-.203	.080	-2.526	.012*
Outcome Variable: Avoidant Problem Solving Style (APS)					
NU		.123	.049	2.526	.012*
NPO		.367	.031	11.782	< .001*
NU x NPO	.004	.007	.005	1.502	.134
Age		-.010	.088	-.116	.908

Depression		.081	.066	1.238	.217
Anxiety		-.156	.068	-2.286	.023*
Outcome Variable: Procrastination					
NU		.318	.076	4.171	< .001*
NPO		.142	.054	2.626	.009*
NU x NPO	.000	-.003	.007	-.489	.625
Age		.368	.133	2.772	.006*
Depression		.505	.098	5.140	< .001*
Anxiety		-.331	.103	-3.203	.002*

It was expected that higher NPO would decrease the effect of NU on RPS. Results showed that the interaction effect of NU and NPO was significant (β = .029, *SE* = .012, $p < .05$), indicating that NPO moderates the relationship between RPS and NU. This means that hypothesis 3a is accepted. This result was the only significant moderation result of this analysis.

Post-hoc probing of the significant interaction revealed that the association between NU and RPS was significant at the mean NPO level (b = -.535, t = -4.105, p < .001) and on lower levels of NPO (-1 *SD*; b = -.830, t = -4.602, p < .001). However, the conditional effect of NPO on the association between NU and RPS was insignificant when NPO was elevated (+1 *SD*; b = -.247, t = -1.402, p = .162). This means individuals with low NU may utilize RPS when NPO is also low, supporting hypothesis 3a. However, increasing NPO can hinder individuals with low and high NU from employing RPS to solve their problems.

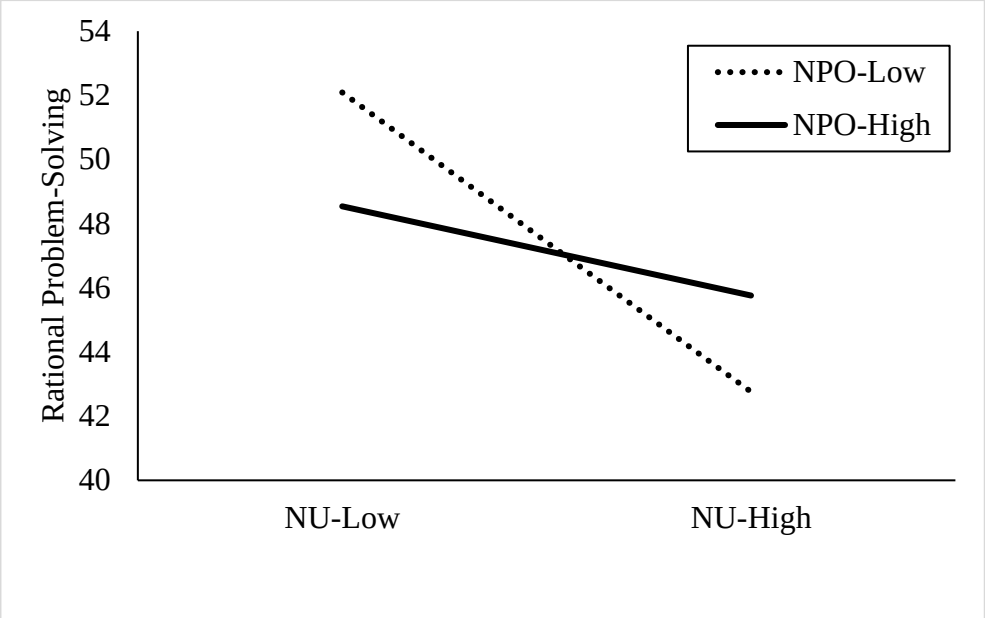

Figure 3.2: The moderation effect of negative problem orientation between negative urgency and rational problem solving style.

NPO was expected to increase the effect of NU on both ICS, APS, and the outcome variable, procrastination. However, none of the results were significant. Beginning with ICS, the relationship between NU and ICS was not moderated by NPO (β = .001, *SE* = .005, *p* = .938). Another non-significant result was observed with APS (β = .007, *SE* = .005, *p* = .133). Finally, NPO did not moderate the relationship between NU and procrastination (β = -.003, *SE* = .007, *p* = .625). To sum up, NPO only moderated the relationship between NU and RPS while controlling for age, depression, and anxiety. According to these results, hypotheses 3b, 3c, and 4 are not accepted.

Chapter 4:
DISCUSSION

The current study aimed to explain how people with NU use procrastination to avoid stressful situations using different problem-solving dimensions, mainly adaptive and non-adaptive problem-solving styles. Accordingly, the association between NU and procrastination was examined through the problem-solving styles as mediators and NPO as the moderator. It was hypothesized that people with high NU mainly use dysfunctional problem-solving techniques, which ultimately results in higher levels of procrastination even when the levels of anxiety and depression are controlled. According to the results, this pattern was observed in APS but not with ICS. Finally, NPO's moderator role was insignificant in all proposed associations except for NU's association with RPS.

In line with the literature, NPO had the strongest correlations with depression and anxiety (Haugh, 2006; Fergus et al., 2015; Nezu et al., 2004; Wilson et al., 2011). This was expected as problem orientation can change how people view and solve problems (Eskin, 2012). Interestingly, there was no significant correlation between NPO and RPS. Previous findings suggest that NPO increases the use of APS and ICS while decreasing the use of RPS, and there are significant correlations between social problem-solving dimensions (D'Zurilla et al., 2002; D'Zurilla et al., 2011; Eskin & Aycan, 2009).

4.1 The Mediator Role of Problem Solving Styles

The current findings show positive relationships between NU and both maladaptive problem-solving styles. This finding is in line with the literature as intense emotions can deplete the mental resources to use RPS, as its problem-solving steps

require more effort and skills compared to dysfunctional problem-solving styles, making it difficult for one to consider all of the possible solutions and consequences of each, leading to poor decision-making and impulsive action (Cyders & Smith, 2008; King et al., 2018).

The passive problem-solving style, APS, was found to mediate the association between NU and procrastination. This result was expected since procrastinators use avoidance as a maladaptive coping behavior (Verešová, 2013). Furthermore, people use dysfunctional problem-solving styles to employ avoidance as a coping mechanism (D'Zurilla & Chang, 1995). Actively choosing to do nothing about the problem as a first-line defense is an impulsive short-term solution that can bring the benefits of much-needed relief for the negatively urgent individual. This is similar to impulsive inaction, which can be referred to as refraining from taking action even though it would be beneficial for the individual to take action to avoid the intense stress that the action will bring (Guller et al., 2014). Avoiding the problem is the approach to reduce the short-term stress for these people. Nevertheless, as the problem persists, its stress will eventually outweigh the short-term relief gained by avoiding it. For instance, an individual who is unhappy with their paycheck may need to ask their boss for a raise to solve their problem. However, they may experience a considerable amount of stress just by thinking about talking to their boss. Therefore, they may choose to do nothing about their problem to avoid it, which would not solve their initial problem with their job. This aligns with what is described as APS by D'Zurilla and Nezu (2010). In other words, people with APS procrastinate more as they prefer not to confront the problem directly. They tend to evade the problem by procrastinating, hoping it will resolve itself. In the meantime, they may experience relief from the prospective stress of trying to solve a problem they feel incapable of solving.

Other maladaptive problem-solving style, ICS, was used as much as APS by people with NU. However, ICS had a suppressive effect on procrastination, meaning that people with NU using APS may resort to behavior patterns other than procrastination to solve their problems. This result was somewhat unexpected as avoidant copers use both problem-solving styles (D'Zurilla & Chang, 1995). Furthermore, in line with the literature, procrastination was found to be strongly positively associated with NU (Svartdal, 2017). Accordingly, it was expected that impulsive problem solvers with high NU would use procrastination as a coping behavior similar to avoidant problem solvers. Compared to ICS, procrastination is more of a passive concept and may be more similar to the APS dimension of social problem-solving theory than ICS. Therefore, items regarding ICS in SPSI-R may not reflect the passivity of procrastination, and participants may not have considered impulsive actions in the survey as procrastination.

People high in NU could be more prone to skip RPS steps and find a quick solution to relieve their stress due to the feeling that they should do something immediately to make the difficult emotions go away. Therefore, they are more likely to use immediate maladaptive styles ICS or APS to solve their problems. There is also a significant relationship between NU and substance abuse disorders (Kaiser et al., 2012). For example, alcohol or other sedatives may be abused as a solution by impulsive or avoidant problem solvers to reduce the stress caused by the problem. This is similar to the definition of procrastination: doing other things instead of solving the problem itself. This is further supported by the findings that indicate that academic procrastinators are more likely to abuse substances (Gita et al., 2022; Yaghoobi et al., 2016), similar to people with high NU.

Together with substance use disorders, addictions are another commonly seen disorder type in people with higher NU (Billieux et al., 2010; Burnay et al., 2015; Kaiser et al., 2012; Wolz et al., 2017; Zorrilla & Koob, 2019a). Studies also identified an association between the neural correlates of addiction and NU (Halcomb et al., 2022; Um et al., 2019; Zorrilla & Koob, 2019b). Addictions in people with high NU may happen due to the overuse of unsuccessful solutions to solve problems. As people with NU try to get away from stress as fast as possible, they may get used to the temporary solutions that they have employed to release their stress. Accordingly, they may get addicted to these solutions and turn to them whenever they encounter a problem. For instance, browsing the internet may be a way to escape academic chores. This impulsive but avoidant solution may be beneficial in reducing the stress of upcoming deadlines. However, since this person will browse the internet every time they experience stress, it can lead to internet addiction. In this example, browsing the internet is a procrastination behavior. Studies show that there is a significant relationship between the level of procrastination and addictive behaviors meaning that procrastinators are more likely to develop addictions such as internet addiction (Demir & Kutlu, 2020; Geng et al., 2018; Hamidi et al., 2015; Hayat et al., 2020; Kim et al., 2017a; Suárez-Perdomo et al., 2022; Uzun et al., 2014). Overall, maladaptive problem-solving styles, mainly APS, can mediate the relationship between NU and procrastination, which increases the risk of getting addicted.

4.2 The Moderator Role of Negative Problem Orientation

NPO only moderated the relationship between NU and RPS. The association between NU and RPS diminished as NPO increased, meaning that people who perceive problems as threats are less likely to use RPS as their problem-solving style. This

finding was expected since people with high NPO use dysfunctional problem-solving styles instead of RPS. Additionally, it requires more time and effort to use RPS than ICS and APS due to particular skill requirements, such as the ability to think about alternative solutions and the consequences of a solution (Eskin, 2012). Individuals high in NU feel the need to take quick action to solve their problems due to their inability to withstand stress (Kaiser et al., 2012; Shaw & Timpano, 2016). A combination of additional time and effort requirements with lesser distress tolerance may prevent people with high NU from utilizing RPS to solve their problems. This may also create a robust association between maladaptive problem-solving styles and NU, which may have led NPO to fail to moderate the associations between them.

Impulsive individuals with higher NU have poor problem-solving skills, indicating that they mostly use one of the dysfunctional problem-solving styles (Lee & Kwon, 2001; McMurran et al., 2002; Ramadan & McMurran, 2005; Rodríguez-Fornells & Maydeu-Olivares, 2000). This may also explain the robust association between NU and dysfunctional problem-solving styles, which do not depend on the moderation of NPO. Lower NPO may direct individuals with NU towards using RPS instead of ICS or APS, but there is no distinction between the maladaptive styles.

Finally, another association the results did not provide any evidence regarding the moderator role of NPO was between NU and procrastination. It was expected that when people who cannot tolerate negative emotions also see problems as unsolvable or do not believe in their ability to solve them, they would try to find an action, a quick solution, that does not solve the problem, but instead try to lessen the effects of these negative emotions on themselves. This action would be procrastination, meaning that NPO was expected to strengthen this relationship. However, mediation analyses showed that people with NU use both maladaptive problem-solving styles, and APS positively

mediates the relationship between NU and procrastination, while ICS suppresses this relationship. As people with NPO use both of these problem-solving styles, they may have cancelled out each other, further explaining the failure of NPO to moderate this relationship.

4.3 Limitations and Future Research

Despite the many strengths of this study, such as including a sizeable homogeneous emerging adult sample, it is essential to note several limitations. To begin with, as with all studies that employ cross-sectional design, it is impossible to draw causal relationships from these findings. A longitudinal design may be used in the future to overcome this limitation. Secondly, as most of the participants are students from Koç University, generalizability to the general population is limited. The findings of this study should be replicated in a sample of people from different fields and backgrounds. Another limitation regarding the sample of this study is the predominance of female participants and its impact on the generalizability of the findings to males. Additionally, the survey did not include attention check questions even though precautions were taken to mitigate this, such as excluding the participants who completed the questionnaire in under 10 minutes. The final limitation is the use of self-report measures and the response bias it may have on participants.

Future studies may focus on problem solving therapy (PST, D'Zurilla & Nezu, 2010) and evaluate if it helps with procrastination for people with higher NU. Naturally, a more clinical sample may be used to see if the implications of this study are being carried out to overcome procrastination and lead people to use their time more productively.

Finally, the procrastination concept used in this study can also be referred to as traditional or, in other words, passive procrastination (Chun Chu & Choi, 2005). On the other hand, active procrastination is a comparatively positive concept, as active procrastinators deliberately procrastinate as they work better under pressure and get desirable outcomes (Chun Chu & Choi, 2005). Even though the validity and the general concept of active procrastination are open to discussion (Cao, 2012; Chowdhury & Pychyl, 2018; Pinxten et al., 2019), it would be interesting to see how active procrastination is compared to traditional procrastination that was examined in this study.

Chapter 5:
CONCLUSION

This study aimed to investigate the mediating roles of social problem-solving styles between NU and procrastination and the moderating role of NPO between NU and other study variables, which is a first in the literature. Results revealed new and exciting possible associations regarding certain psychological disorders, such as the development of addictions for people with higher NU, which can be tested in future studies. All problem-solving styles mediated the relationship between NU and procrastination. However, moderation analysis of NPO only revealed a significant interaction between NU and RPS. When NPO increases, negatively urgent people are less likely to employ RPS to solve their problems.

Overall, for people between 18 and 30 years of age with high negative urgency, PST (D'Zurilla & Nezu, 2010) that focuses on teaching people to use RPS instead of dysfunctional problem-solving styles may be a suitable treatment method whether they procrastinate or not as it has been shown that negatively urgent people use less RPS and more dysfunctional problem-solving styles.

Finally, as not all procrastinators experience mental health problems, simple adjustments can aid one in overcoming procrastination without resorting to therapies. For instance, self-regulatory skills training, including controlling stimuli in the work environment to avoid getting distracted during work; time management training, which includes setting self-determined deadlines and monitoring the progress of the current task; and finally, having peer support and sharing experiences with other people who has similar problems can be beneficial intervention methods to fight against procrastination (Grunschel et al., 2018; Van Eerde & Klingsieck, 2018).

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Appendix A: Informed Consent Form

Değerli Katılımcı,

Bu araştırma Koç Üniversitesi bünyesinde Klinik Psikoloji Yüksek Lisans öğrencisi Ertürk Yılmaz tarafından Kadir Has Üniversitesi Sosyal Bilimler Enstitüsü öğretim üyesi Doç. Dr. Ayşe Altan Atalay danışmanlığında sürmekte olan Koç Üniversitesi Etik Kurulları'nın 2023.236.IRB3.106 sayılı onayı ile izin verilen bir tez çalışmasıdır. Bu araştırmaya katıldığınız için teşekkür ederiz. Çalışmanın amacı olumsuz sıkışıklık, sorun çözme akışkanlıkları ve sorun çözme yöneliminin erteleme üzerindeki etkilerinin araştırılmasıdır. Bu nedenle bu konulardaki eğiliminizi ölçmeye yönelik sorulardan oluşan anket formlarını doldurmanız istenmektedir.

Çalışmaya katılım tamamıyla gönüllülük esasına dayanmaktadır. Ankette, sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız tamamıyla gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecek ve elde edilecek bilgiler bilimsel yayınlarda kullanılacaktır. Araştırmanın sonuçları açısından sağlıklı bilgiler edinilmesi için yönergelerin dikkatlice okunması, verilen cevaplarda samimi olunması ve cevaplandırılmamış soru bırakılmaması son derece önemlidir. Sorulara verdiğiniz cevapların herhangi bir olumsuz duruma neden olması beklenmemektedir. Ancak, bir rahatsızlık hissedilmesi durumunda istediğiniz takdirde araştırmacıya başvurabilirsiniz. Katılım sırasında sorulardan ya da herhangi bir başka nedenden ötürü kendinizi rahatsız hissederseniz cevaplama işini herhangi bir yaptırımla karşılaşmadan yarıda bırakmakta serbestsiniz. Çalışmanın yaklaşık 15 dakika sürmesi beklenmektedir. Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz.

Bu araştırma ile ilgili sorularınız veya endişeleriniz varsa lütfen araştırmacıyla iletişime geçiniz.

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Koç Üniversitesi Psikoloji Bölümü

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip bırakabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı olarak kullanılmasını kabul ediyorum.

☐ Evet ☐ Hayır

Appendix B: Demographic Form

1. Yaşınız: _____

2. Cinsiyetiniz:

□ Kadın □ Erkek □ Belirtmek istemiyorum □ Diğer: _____

3. Medeni durumunuz:

□ Bekar □ Evli □ Boşanmış □ Diğer: _____

4. Eğitim Durumunuz:

□ İlkokul □ Lisans □ Diğer: _____

□ Ortaokul □ Yüksek Lisans

□ Lise □ Doktora

5. Öğrenci misiniz?

□ Evet □ Hayır

6. Mesleğiniz: _____

7. Hangi alanda eğitim aldınız veya almaktasınız? _____

8. Ailenizin kaçıncı çocuğusunuz? _____

9. Varsa kız kardeşlerinizin sayısı: _____

10. Varsa erkek kardeşlerinizin sayısı: _____

11. Kardeşleriniz arasında kendiniz de dahil olmak üzere üveylik var mı?

□ Evet □ Hayır

12. Aylık gelir seviyenizi nasıl değerlendirirsiniz?

□ Alt □ Alt-Orta □ Orta □ Üst-Orta □ Üst

13. Şimdiye kadar hiç psikolojik bir rahatsızlık geçirdiniz ya da bir psikolojik rahatsızlık tanısı aldınız mı?

□ Evet □ Hayır

14. Eğer 13. Soruyu “Evet“ olarak yanıtladıysanız lütfen tanınızı aşağıdaki boşluğa yazınız:

_____

15. Şu anda herhangi bir psikolojik rahatsızlıktan dolayı ilaç kullanıyor musunuz?

□ Evet □ Hayır

16. Eğer 15. Soruyu, “Evet“ olarak yanıtladıysanız lütfen ilacın ismini aşağıdaki boşluğa yazınız:

_____

Appendix C: UPPS-P Impulsive Behavior Scale

İnsanlar farklı durumlarda gösterdikleri düşünce ve davranışları ile birbirlerinden ayrılırlar. Bu test bazı durumlarda nasıl düşündüğünüzü ve davrandığınızı ölçen bir testtir.

Lütfen her cümleyi okuyunuz ve o cümlede ifade edilen “Bana hiç uymuyor” seçeneği için 1’i, “Bana uymuyor” seçeneği için 2’yi, “Bana uyuyor “ seçeneği için 3’ü ve “Bana çok uyuyor” seçeneği için 4’ü daire içine alarak işaretleyiniz.

1: Bana hiç uymuyor	2: Bana uymuyor	3: Bana uyuyor	4: Bana çok uyuyor

1. İhtiyatlı ve tedbirli biriyimdir.
2. Düşüncelerim ölçülü ve bir amaca yöneliktir.
3. Düşünmeden konuşan biri değilim.
4. Harekete geçmeden önce biraz durup yapacağım şey üzerine düşünürüm.
5. Nasıl yürüteceğimi tam olarak bilmediğim bir projeye başlamak istemem.
6. Karşılaştığım sorunları mantıklı bir biçimde değerlendirerek “makul” bir yaklaşımda bulunma eğilimindeyim.
7. Kararlarımı genellikle dikkatlice enine boyuna düşünerek veririm.
8. İhtiyatlı biriyimdir.
9. Yeni bir durumun içine girmeden önce, o durumun bana neler kazandırabileceğini bilmek isterim.
10. Herhangi bir şey yapmadan önce genellikle iyice düşünürüm.
11. Bir konuyla ilgili karar vermeden önce tüm avantaj ve dezavantajları hesaba katarım.
12. Dürtülerimi kontrol etmede sorun yaşarım.
13. Şiddetli isteklerime direnç göstermede sorun yaşarım (örneğin yemek, sigara içmek vb.).
14. Kendimi çoğu kez, sonradan pişman olup da kurtulmak istediğim işlerin içine sokarım.
15. Kendimi kötü hissettiğimde, çoğu kez o anda iyi hissettiren fakat sonradan yaptığıma pişman olduğum şeyler yaparım.

16. Kendimi kötü hissettiğim bazı zamanlarda, kendimi kötü hissettirse bile yapmakta olduğum şeyi durduramam.
17. Üzgün olduğum zamanlarda çoğu kez düşünmeden hareket ederim.
18. Reddedildiğimi hissettiğim zamanlarda, çoğu kez sonradan pişman olduğum şeyler söylerim.
19. Duygularıma göre hareket etmemin önüne geçemiyorum.
20. Sorunlarla karşılaştığımda onları çoğu kez içinden çıkılmaz bir hale getiririm çünkü üzgün olduğum zamanlarda düşünmeden hareket ederim.
21. Bir tartışmanın en ateşli anında, çoğu kez sonradan pişman olduğum sözler söylerim.
22. Duygularımı her zaman kontrol altında tutmayı başarabilirim.
23. Bazen aklıma eseni yapar ve sonra pişman olurum.
24. Genellikle yeni ve heyecan verici deneyimler ve duygular ararım.
25. Bu hayatta her şeyi bir kere deneyeceğim.
26. Bir sonraki hamlenin çabuk yapıldığı spor ve oyunlardan hoşlanırım.
27. Su kayağı yapmaktan keyif alabilirim.
28. Risk almaktan hoşlanırım.
29. Paraşütle atlamak hoşuma gidebilir
30. Biraz korkutucu ya da gelenek dışı dahi olsalar, yeni deneyimler ve duygular yaşamaya açığımdır.
31. Uçak kullanmayı öğrenmek hoşuma gidebilir.
32. Ara sıra biraz korkutucu işler yapmaktan keyif alırım.
33. Yüksek bir dağın tepesinden aşağıya hızla kayarken hissedilen duygular bana keyif verebilir.
34. Hava tüpü olmadan dalış yapmak hoşuma gidebilir.
35. Arabayı hızlı sürmek hoşuma gidebilir.
36. Genellikle olayları sonuna kadar takip etmeyi severim.
37. Kolayca pes etme eğiliminde olan biriyim.
38. Bitmemiş, yarım kalan işler canımı sıkar.
39. Bir şey yapmaya başladığımda, durmaktan nefret ederim.
40. Kolaylıkla konsantre olabilirim.
41. Başladığım işi bitiririm.

42. İşleri zamanında bitirebilmek için belirli bir düzen içinde çalışma konusunda oldukça iyiyimdir.
43. Ben her zaman yapacak bir işi olan üretken biriyim.
44. Başladığım hemen hemen her işin sonunu getiririm.
45. Yapılması gereken küçük işleri bazen hiç umursamam.

Appendix D: Social Problem Solving Inventory-Revised

Aşağıda, insanların günlük yaşamda sorunlarla karşılaştıkları zaman gösterebilecekleri bazı düşünce, duygu ve davranış biçimleri verilmektedir. Bu ankette geçen, ***"sorun"*** kelimesi ile yaşamınızda önemli bulduğunuz ve sizi çok rahatsız eden ama nasıl düzelteceğinizi bilmediğiniz durumlar kastedilmektedir. Sorun, sizin kendinizle (düşünceleriniz, duygularınız, davranışınız, sağlığınız veya görünümünüz ve benzeri), diğer insanlarla olan ilişkilerinizle (aile, arkadaş, öğretmen veya patron ve benzeri), veya çevreniz ve sahip olduklarınızla (ev, araba, mülk veya para ve benzeri) ilgili olabilir. Lütfen aşağıdaki her bir ifadeyi dikkatlice okuyunuz ve o ifadenin sizin için ne derece geçerli olduğuna karar veriniz. Burada verilebilecek cevapların doğrusu veya yanlışı yoktur. Sorunlarla karşılaştığınızda nasıl düşündüğünüzü, hissettiğinizi ve davrandığınızı hayal ediniz. Sizin için en geçerli cevabı yansıtan kutunun içine şu şekilde (X) bir çarpı işareti koyunuz. Her bir soruyu cevaplamaya çalışınız.

Benim için hiç doğru değil	Benim için birazcık doğru	Benim için kısmen doğru	Benim için çok doğru	Benim için tamamen doğru

1.Sorunlarımı çözmeye çalışacağım yerde onlar hakkında endişelenerek çok zaman harcıyorum.

2. Çözmem gereken önemli bir sorunum olduğunda, kendimi tehdit edilmiş ve korkmuş hissederim.

3. Karar verirken, bütün seçenekleri yeterince dikkatli bir şekilde değerlendirmem.

4. Bir karar almam gerektiği zaman, kararla ilgili her bir seçeneğin diğer insanlar üzerindeki olası etkilerini göz önüne alamam.

5. Bir sorunu çözmeye çalıştığım zaman, farklı çözümleri düşünür ve daha sonra bunların bazılarını daha iyi bir çözüme ulaşmak için birleştirmeye çalışırım.

6. Önemli bir karar almam gerektiği zaman kendimi gergin hissederim ve kendimden emin olamam.

7. Bir sorunu çözmek için ilk baştaki çabalarım başarısız olduğunda, vazgeçmeyip kolayca pes etmezsem sonunda iyi bir çözüm bulacağımın farkındayımdır.

8. Bir sorunu çözmeye çalışırken aklıma ilk gelen düşünceyle hareket ederim.

9. Bir sorunum olduğunda, çözülebileceğine inanırım.

10. Kendim çözmeye çalışmadan önce, bir sorunun kendiliğinden çözülüp çözülmeyeceğini görmek için beklerim.
11. Çözmem gereken bir sorunum olduğunda yaptığım şeylerden biri, durumu incelemek ve elde etmek istediğim sonucun önünde ne tür engellerin olduğunu bulmaya çalışmaktır.
12. Bir sorunu çözmede ilk çabalarım başarısız olduğu zaman çok fazla hayal kırıklığı yaşarım.
13. Zor bir sorunla karşılaştığımda, ne kadar çok çalışırsam çalışayım kendi başıma çözebileceğimden şüphe ederim.
14. Hayatımda bir sorun ortaya çıktığında, çözmeye çalışmayı olabildiğince ertelerim.
15. Bir sorunun çözümüyle uğraşırken çözümün doğuracağı olası bütün sonuçları dikkatlice değerlendirmek için zaman harcamam.
16. Sorunlarla uğraşmaktan kaçınmak için hayatımın akışını değiştiririm.
17. Zor sorunlar beni üzer ve telaşlandırır.
18. Vermem gereken bir karar olduğunda, her seçeneğin olumlu ve olumsuz sonuçlarını tahmin etmeye çalışırım.
19. Hayatımda sorunlar ortaya çıktığında, mümkün olan en kısa süre içerisinde onları çözmek isterim.
20. Bir sorunu çözmeye çalıştığım zaman, yaratıcı olmaya ve yeni veya orijinal çözümler düşünmeye çalışırım.
21. Bir sorunu çözmeye çalıştığımda, aklıma gelen ilk iyi fikirle hareket ederim.
22. Bir sorun için olası farklı çözüm seçeneklerini düşünmeye çalıştığımda aklıma çok fazla fikir gelmez.
23. Hayatımdaki sorunları çözmek yerine onları düşünmekten uzak durmayı tercih ederim.
24. Bir karar verirken her seçeneğin hem kısa hem de uzun vadeli sonuçlarını göz önüne alırım.
25. Bir sorunu çözdükten sonra neyin doğru neyin yanlış gittiğini incelerim.
26. Bir sorunun çözümünden sonra, duygularımı gözden geçirir ve iyi yönde ne kadar değiştiklerini değerlendiririm.
27. Bir sorunu çözmeden önce, başarı şansımı arttırmak için çözümün alıştırmasını yaparım.

28. Zor bir sorunla karşılaştığımda, yeterince gayretli çalışırsam onu tek başıma çözebileceğime inanırım.
29. Çözmem gereken bir sorun olduğunda, ilk yaptığım işlerden birisi sorun hakkında olabildiğince fazla bilgi toplamaktır.
30. Hayatımdaki sorunları çözmeyi, bıçak kemiğe dayanıncaya kadar ertelerim.
31. Sorunlardan kaçmaya onları çözmekten daha fazla zaman harcıyorum.
32. Bir sorunu çözmeye çalıştığımda, öylesine telaşlanıyorum ki net düşünemiyorum.
33. Bir sorunu çözmeye çalışmadan önce, tam olarak neye ulaşmak istediğimi bilebilmek için kendime bir hedef belirlerim.
34. Bir karar vermem gerektiği zaman, her bir seçeneğin olumlu ve olumsuz yönlerini düşünmek için zaman harcamam.
35. Bir sorunu çözdüğümde sonuç tatmin edici değilse, neyin yanlış gittiğini bulmaya çalışırım ve yeniden denerim.
36. Yaşamımdaki sorunları çözmek zorunda olmaktan nefret ediyorum.
37. Bir sorunu çözdüğümde, sorunla ilgili durumun olumlu yönde ne kadar değiştiğini olabildiğince dikkatli bir biçimde değerlendirmeye çalışırım.
38. Bir sorunum olduğunda, sorunu olumlu yönde faydalanılabilecek bir fırsat olarak görmeye çalışırım.
39. Bir sorunu çözmeye çalıştığımda, olabildiğince fazla çözüm seçeneği düşünmeye çalışırım; ta ki aklıma başka bir düşünce gelmeyinceye kadar.
40. Karar almam gerektiğinde, her bir seçeneğin sonuçlarını değerlendirip birbirleriyle karşılaştırırım.
41. Önemli bir sorunu çözmem gerektiğinde üzüntülü, bezgin ve hareketsiz olurum.
42. Zor bir sorunla karşılaştığımda, çözmek için birilerinden yardım isterim.
43. Bir karar vereceğim zaman, her bir seçeneğin duygularım üzerindeki olası etkisini hesaba katarım.
44. Çözmem gereken bir sorunum olduğunda, çevremdeki hangi etmen ve koşulların sorunun oluşmasına katkıda bulunduğunu araştırırım.
45. Karar alırken, her seçeneğin sonuçlarını düşünmeden içimden gelen duygularla hareket ederim.
46. Karar alırken, seçenekleri değerlendirmek ve birbiriyle karşılaştırmak için sistematik bir yöntem kullanırım.
47. Bir sorunu çözmeye çalışırken, amacımın ne olduğunu sürekli aklımda tutarım.

48. Bir problemi çözmeye çalışırken, soruna olabildiğince değişik açılardan bakarım.
49. Bir problemi anlamada sıkıntıya düşersem, soruna özgü ve sorunu netleştirmeye yarayacak somut bilgiler edinmeye çalışırım.
50. Bir sorunu çözmede ilk çabalarım başarısız olursa, cesaretim kırılır ve moralim bozulur.
51. Uyguladığım bir çözüm sorunumu tatminkar bir biçimde çözmezse, neden o çözümün işe yaramadığını araştırmak için zaman harcamam.
52. Karar vermem söz konusu olduğunda çok fazla düşünmeden hareket ederim.

Appendix E: Pure Procrastination Scale

Aşağıda verilen maddelerin her birini dikkatlice okuduktan sonra her bir maddenin size ne ölçüde uygun olduğunu ilgili seçeneği işaretleyerek belirtiniz. Doğru ve yanlış cevap yoktur.

1: Kesinlikle katılmıyorum	2: Katılmıyorum	3: Kararsızım	4: Katılıyorum	5: Tamamen katılıyorum

1. Karar vermeyi iş işten geçinceye kadar ertelerim	1	2	3	4	5
2. Kararımı verdikten sonra bile onu uygulamayı ertelerim	1	2	3	4	5
3. Nihai kararları almadan önce önemsiz konular üzerine çok fazla zaman harcarım	1	2	3	4	5
4. Son teslim günü yaklaşan işler (ödev, proje vs) için hazırlık yaparken, genellikle zamanımı başka şeyler yaparak harcarım	1	2	3	4	5
5. Oturmak ve yapmak dışında başka bir şey gerektirmeyen işleri dahi nadiren zamanında bitiririm.	1	2	3	4	5
6. Kendimi genelde günler öncesinde yapmayı planladığım işleri yaparken bulurum	1	2	3	4	5
7. Sürekli onu yarın yaparım diyorum	1	2	3	4	5
8. Genellikle yapmak zorunda olduğum işlere başlamayı ertelerim	1	2	3	4	5
9. Genellikle işleri bitirecek zamanımın kalmadığını görürüm	1	2	3	4	5
10. Bir şeyleri zamanında yapmam	1	2	3	4	5
11. İşleri zamanında bitirme konusunda pek başarılı değilim	1	2	3	4	5
12. İşleri son dakikaya kadar ertelemenin bedeli benim için ağır olmuştur.	1	2	3	4	5

Appendix F: Patient Health Questionnaire-9

Son bir hafta içinde aşağıdaki problemler sizi ne sıklıkla rahatsız etti?

	Hiç	Birkaç gün	Günlerin yarısından fazlasında	Hemen hemen her gün
1. Bir şey yapmak konusunda ilgisizlik veya zevk almamak				
2. Üzgün, depresif veya umutsuz hissetmek				
3. Uykuya dalmada veya uyumaya devam etmekte zorluk veya çok fazla uyumak				
4. Yorgun hissetmek veya enerjinizin az olması				
5. İştahsızlık veya çok fazla yemek				
6. Kendinizi kötü hissetmeniz – veya kendinizi başarısız ya da kendinizi veya ailenizi hayal kırıklığına uğrattığınızı düşünmeniz				
7. Gazete okumak veya televizyon seyretmek gibi faaliyetlerde dikkatinizi toparlamakta güçlük çekmeniz				
8. Başkalarının fark edeceği kadar yavaş hareket etmeniz veya konuşmanız. Veya tam aksine – normalden çok daha fazla hareket edecek kadar kıpır kıpır ve huzursuz olmanız				
9. Ölmüş olsanız daha iyi olacağınız veya bir şekilde kendinize zarar verme düşünceleri				

Herhangi bir problem işaretlediyseniz, bu problemler sizin için şunları ne kadar zorlaştırdı: İşinizi yapmak, evdeki işleri yapmak veya başkalarıyla geçinmek

Hiç	Biraz	Çok	Aşırı Derece

Appendix G: General Anxiety Disorder-7

Son bir hafta içinde aşağıdaki problemler sizi ne sıklıkla rahatsız etti?

	Hiç	Birkaç gün	Günlerin yarısından fazlasında	Hemen hemen her gün
1. Kendini sinirli, kaygılı veya çok gergin hissetme				
2. Kaygılarını durduramama veya kontrol edememe				
3. Farklı şeylerden çok fazla endişelenme				
4. Gevşemede güçlük çekme				
5. Sakince oturamayacak kadar kendini huzursuz hissetme				
6. Kolayca kızma ve asabileşme				
7. Sanki çok kötü bir şey olacakmış gibi korku duyma				

Herhangi bir problem işaretlediyseniz, bu problemler sizin için şunları ne kadar zorlaştırdı: İşinizi yapmak, evdeki işleri yapmak veya başkalarıyla geçinmek

Hiç	Biraz	Çok	Aşırı Derece