

A MODEL FOR PSYCHOLOGICAL DISTRESS AMONG UNIVERSITY  
STUDENTS: MINDFULNESS, DECENTERING, REFRAMING, AND  
INDIRECT EFFECT OF EMOTION REGULATION DIFFICULTIES

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Approval of the Graduate School of Social Sciences

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

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## **ABSTRACT**

### **A MODEL FOR PSYCHOLOGICAL DISTRESS AMONG UNIVERSITY STUDENTS: MINDFULNESS, DECENTERING, REFRAMING, AND INDIRECT EFFECT OF EMOTION REGULATION DIFFICULTIES**

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The study aimed to examine the relationship between five facets of mindfulness (observing, describing, acting with awareness, non-judging of experience, and non-reactivity to inner experience), reframing, decentering and psychological distress with the mediating effect of emotion regulation difficulties. The participants of this study were 620 undergraduate students (429 females and 191 males) from a state university in Ankara. Experiences Questionnaire, Depression Anxiety and Stress Scale, Five Facet Mindfulness Questionnaire, Emotion Regulation Questionnaire, Difficulties in Emotion Regulation Scale were used to gather data. Structural Equation Modeling (SEM) was utilized to test the proposed model. The results revealed that the proposed model fit the data. Decentering, describing, non-judging of inner experience and non-reactivity to inner experience were not directly associated with psychological distress, but they were indirectly related to psychological distress through emotion regulation difficulties. Acting with awareness was both directly and indirectly associated with psychological distress through emotion regulation difficulties. Further, describing, acting with awareness,

non-judging of inner experience, non-reactivity to inner experience, decentering were directly and negatively associated with emotion regulation difficulties. The results were discussed in the light of the relevant literature.

**Keywords:** Psychological Distress, Emotion Regulation Difficulties, Five Facets of Mindfulness, Decentering, Reframing

## ÖZ

### ÜNİVERSİTE ÖĞRENCİLERİNDE PSİKOLOJİK SIKINTIYA YÖNELİK BİR MODEL TESTİ: BİLİNÇLİ FARKINDALIK, MERKEZSİZLEŞTİRME, BİLİŞSEL YENİDEN DEĞERLENDİRMEDE DUYGU DÜZENLEME GÜÇLÜKLERİNİN DOLAYLI ETKİSİ

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Bu çalışmanın amacı Duygu Düzenleme Terapisi kuramsal çerçevesi temel alınarak üniversite öğrencilerinde bilinçli farkındalığın beş boyutu (gözlemleme, tanımlama, farkındalıkla davranma, içsel deneyimleri yargılamama ve içsel deneyimlere tepkisizlik), merkezsizleştirme (decentering) ve bilişsel yeniden değerlendirme ile psikolojik sıkıntı arasındaki ilişkide duygu düzenleme güçlükleri dolaylı etkisini incelemektir. Araştırmaya Ankara'daki bir devlet üniversitesinde okuyan 429'u kadın ve 191'i erkek olmak üzere 620 üniversite öğrencisi katılmıştır. Çalışmada, Depresyon, Anksiyete ve Stres Ölçeği, Duygu Düzenleme Ölçeği, Yaşantılar Ölçeği, Beş Boyutlu Bilinçli Farkındalık Ölçeği ve Duygu Düzenlemede Güçlükler Ölçeği veri toplama aracı olarak kullanılmıştır. Önerilen model Yapısal Eşitlik Modeli (YEM) ile test edilmiş ve YEM analizi sonuçları modelin veriye uyum sağladığını göstermiştir. Çalışmanın sonucunda, psikolojik sıkıntı ile merkezsizleştirme, tanımlama, içsel deneyimleri yargılamama ve içsel



deneyimlere tepkisizlik arasında doğrudan ilişki bulunmazken duygu düzenleme güçlükleri aracı rolü ile dolaylı ve anlamlı ilişkiler bulunmuştur. Farkındalıkla davranma ve psikolojik sıkıntı arasında ise hem doğrudan hem de dolaylı ve anlamlı bir ilişki bulunmaktadır. Duygu düzenleme güçlükleri ile merkezsizleştirme, tanımlama, farkındalıkla davranma, içsel deneyimleri yargılamama ve içsel deneyimlere tepkisizlik ile doğrudan ilişkili olduğu bulunmuştur. Çalışmanın bulguları alan yazın ışında tartışılmıştır.

**Anahtar Kelimeler:** Psikolojik Sıkıntı, Duygu Düzenleme Güçlükleri, Bilinçli Farkındalığın Beş Boyutu, Merkezsizleştirme, Bilişsel Yeniden Değerlendirme

*To my father Abdülkadir Ünlü ...*

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## **CHAPTER 1**

### **INTRODUCTION**

In this chapter, the background, purpose, and significance of the study are introduced, and the terms are defined.

#### **1.1 Background to the Study**

Past research on psychological health have focused on university-aged population, and there is an assertion that, compared to the past, both the severity and prevalence of psychological problems among university students have increased (Benton, Robertson, Tseng, Newton, & Benton, 2003; Fink, 2014; Sharkin, 2012). For instance, many university students (more than 70%) experience distress because of some reasons such as parental pressure, moving to another city, and choosing a career (Bland, Melton, Welle, & Bigham, 2012).

The advancement of science and technology has also introduced certain changes and issues in university students' lives. In order to refer to the technologically advanced university students, there are some terms or monikers such as "Millennials" (e.g., Staruss & Howe, 2000), "Z generation" (e.g., Tulgan, 2013), and "Digital Natives" (e.g., Prensky, 2001). All of them point out that this generation has different characteristics. In a good manner, they are more diverse, smart, cooperative, rule followers, and great multi-taskers (Brunner, Wallace, Sellers, & McCabe, 2014; Staruss & Howe, 2000). Today's university students are also under the pressure to achieve their goals before anyone else does, or want to solve problems rapidly. Therefore, one of the most important priorities of students seems to be successful or to be better than

others in a shorter period of time (Brunner et al., 2014). As Langer (1989) stated that if students focus on the results without paying attention on the process, they worry about success or failure. Thus, their innate desires to explore disappear, and they become mindless. Further, they may become competitive, impatient, and individuals wanting immediate results. Thus, living in a toughly competitive environment causes them to experience psychological distress (Brunner et al., 2014).

University students also have to cope with a lot of developmental problems. Erikson's (1968) psychosocial theory of development proposed that during the young adulthood, individuals experience intimacy versus isolation crisis. During that period, they try to develop intimate and trustworthy relationships with others or they feel loneliness and isolation. Arnett (2000) uses the new term "emerging adulthood" (between the ages of 18 to 29) which refers to the time of transition from adolescence to adulthood to define developmental stage of university-aged population. Individuals in the emerging adulthood stage focus on themselves try to explore opportunities in terms of love and career. In addition to exploring their own identity, they try to handle some changes such as moving to another city and living in a dormitory (Arnett, 2007).

The unique characteristics of today's university students and the developmental stage of university students have created a population that is prone to psychological distress. Furthermore, psychological distress of university students have significant implications not only at the individual level, but also at interpersonal (e.g., roommates, classmates, and faculty) and at the institutional levels (e.g., legal challenges and counseling services) (Kitzrow, 2003). Thus, understanding factors that contribute to psychological distress of students and designing and providing preventive or remedial services have gained importance for both researchers and practitioners.

Studies indicated that rates of elevated distress are significantly higher among the university students than the community sample (Adlaf, Gliksman, Demers, & Newton-Taylor, 2001; Larcombe et al. 2016; Stallman, 2010). Further, psychological distress among university students is regarded as a major and global issue (Eskin et al., 2016; Larcombe et al., 2016). Around the globe, 33.6% of the university students have experienced elevated psychological distress (Eskin et al., 2016). In Turkey, 30 to 40 percent of university students have been reported to suffer from moderate or high distress (Bayram & Bilgel, 2008; Demirüstü, Binboğa, Öner, & Özdamar, 2009). Furthermore, elevated psychological distress has been shown to impact other issues such as lower academic achievement (Stallman, 2010), alcohol problems (Geisner, Larimer, & Neighbors, 2004), suicide ideation and attempts (Eskin et al., 2016).

Thus far, theories of psychological distress shed light on its reasons, and offer prevention and intervention models. However, with the noticeable changes in life and with the complexities of the modern world, needs of the clients have also changed. This situation brought the issue of providing new approaches or methods to assist clients. Mindfulness, one of the new constructs, has become popular over the recent years. Mindfulness is described as “the awareness that emerges through paying attention on purpose, in the present moment, and non-judgmentally to the unfolding of experience moment by moment” (Kabat-Zinn, 2003, p. 145). The term mindfulness is inherited from the ancient Eastern philosophy, but it is similar to a variety of western philosophical and psychological ideas such as existentialism, naturalism and humanism (Brown, Ryan, & Creswell, 2007).

The vast majority of research about mindfulness has been conducted on psychological investigations and interventions. The basic mindfulness theories are Mindfulness- Based Stress Reduction (Kabat-Zinn, 1982), Mindfulness Based Cognitive Therapy (Teasdale, Segal, & Williams, 1995), Dialectical Behavior Therapy (Linehan, 1993), and Acceptance and Commitment Therapy

(Hayes, Strosahl, & Wilson, 1999). Indeed, literature review revealed that these theories are effective to reduce many forms of distress (e.g., Bannan, 2010; Linehan et al., 1999; Kuyken et al., 2008). Considering mindfulness based therapies, a new integrated therapy, Emotion Regulation Therapy has become one of the newest and effective therapies.

Emotion Regulation Therapy was developed by Mennin and Fresco (2009) to help individuals with generalized anxiety disorder. Emotion Regulation Therapy integrates cognitive behavioral treatments and mindfulness based treatments with affect science (Mennin & Fresco, 2014). This therapy is an individual intervention and consists of 16 sessions over 20 weeks (Mennin & Fresco, 2009, 2014). Furthermore, ERT has emphasized three mechanisms which are (1) motivation, (2) emotion regulation, and (3) contextual learning (Mennin & Fresco, 2014). Very broadly, ERT assists clients to raise their motivational awareness, increase emotion regulation capacities, and develop new learning repertoires to live a valued life (Mennin, Fresco, Ritter, Heimberg, 2015). This theory has been taken as the basic theoretical framework of the present study because it integrates strong evidence-based approaches, offers emotion regulation skills for the prevention and intervention of distress. Moreover, the results of the studies about ERT are also too supportive. Thus, emotion regulation, which is one of the ERT model mechanisms, was investigated in this current study. Accordingly, attending and allowing (mindful attention regulation), and reframing and decentering (meta-cognitive regulation) decrease emotion regulation difficulties, thus distress decrease. Based on the Emotion Regulation Therapy, the role of mindfulness, decentering, reframing, and emotion regulation difficulties on psychological distress are reviewed.

First of all, emotion regulation difficulties cause remarkable intrapersonal and interpersonal problems (Crowell, Beauchaine, & Linehan, 2009; Gross & Munoz, 1995). Studies also revealed that emotion regulation strongly predict

psychological distress (e.g., Bardeen, Fergus, & Orcutt, 2012; Pepping, O'Donovan, Zimmer-Gembeck, & Hanisch, 2014). Moreover, these findings indicated the importance of prevention and intervention models of emotion regulation. Through the lens of Emotion Regulation Therapy, it seems emotion regulation is a key feature of psychological distress (Mennin & Fresco, 2009), and mindfulness, decentering, and reframing are vital skills for emotion regulation.

In terms of mindfulness, studies have found that it has significant implications on psychological distress (Lafferty, 2013; Masuda & Tully, 2012; Ülev, 2014) and emotion regulation (Baer, Smith, Hopkins, Krietemeyer & Toney, 2006; Feldman, Hayes, Kumar, Greeson, & Laurenceau, 2007). Studies also indicated the significance of examining dimensions of mindfulness (Baer et al., 2006; Cardaciotto, Herbert, Forman, Moitra, & Farrow, 2008). Moreover, there are inconsistent results about which facets of mindfulness most strongly contribute to less psychological distress (Bowlin & Baer, 2012; Duan, 2016).

Decentering is another emotion regulation skill in ERT. It refers the ability to distance ourselves from thoughts and feelings to see them as objective and temporary events rather than as absolute truths (Fresco et al., 2007; Safran & Segal 1990). In Emotion Regulation Therapy, emotions and thoughts have been described with “a big lake” metaphor, and Mennin and Fresco (2014) stated that thoughts and emotions resemble to a big lake, and decentering is sitting by the side of the lake instead of jumping into the lake. Thereby, decentering helps people to perceive thoughts and emotions more objectively, and realize that they are not their thoughts (Fresco et al., 2007; Safran & Segal 1990), and decentering assists people to decrease their negative thoughts and emotions that cause psychological distress (Segal, Williams, & Teasdale, 2002). Studies with regard to decentering generally have focused on depression (e.g., Fresco, Segal, Buis, & Kennedy, 2007; McCracken, Gutierrez-Martinez, & Smyth, 2012), but there is a few study that examines psychological distress and



decentering. According to the existing study findings, less decentering has been negatively correlated with psychological distress (Morgan, 2015; Pearson, Brown, Bravo, & Witkiewitz, 2015).

Reframing is about ways to find different perceptions for a situation (Cormier, Nurius, & Osborn, 2009). Reappraisal is a form of reframing which is a way to reduce negative emotions by changing the way their evaluation of a situation (Gross, 1998). Most of the studies have supported the positive contribution of reappraisal on psychological distress (e.g., Garnefski et al., 2002; Shiota, 2006; Talasman, 2013). However, some other studies have suggested that reappraisal may not be a necessary skill to reduce distress (Aldao, Nolen-Hoeksema, & Schweitzer, 2010; Corcoran, Farb, Anderson, & Segal, 2010; Hayes & Feldman, 2004).

As a result, in addition to ERT, literature review revealed the importance of mindfulness, decentering, reframing, and emotion regulation difficulties on psychological distress (e.g., Beath, Jones, & Fitness, 2015; Bowlin & Baer, 2012; Lafferty, 2013; Masuda & Tully, 2012; Morgan, 2015; Rugancı & Gençöz, 2010). However, the relationships among five facets of mindfulness, decentering, reframing and their relation to psychological distress are not investigated well enough. Further, emotion regulation mechanism offered in ERT has not been tested yet among university students. Thus, utilizing ERT as a framework, the aim of the present study is to test the proposed model of psychological distress among a group of university students in Turkey.

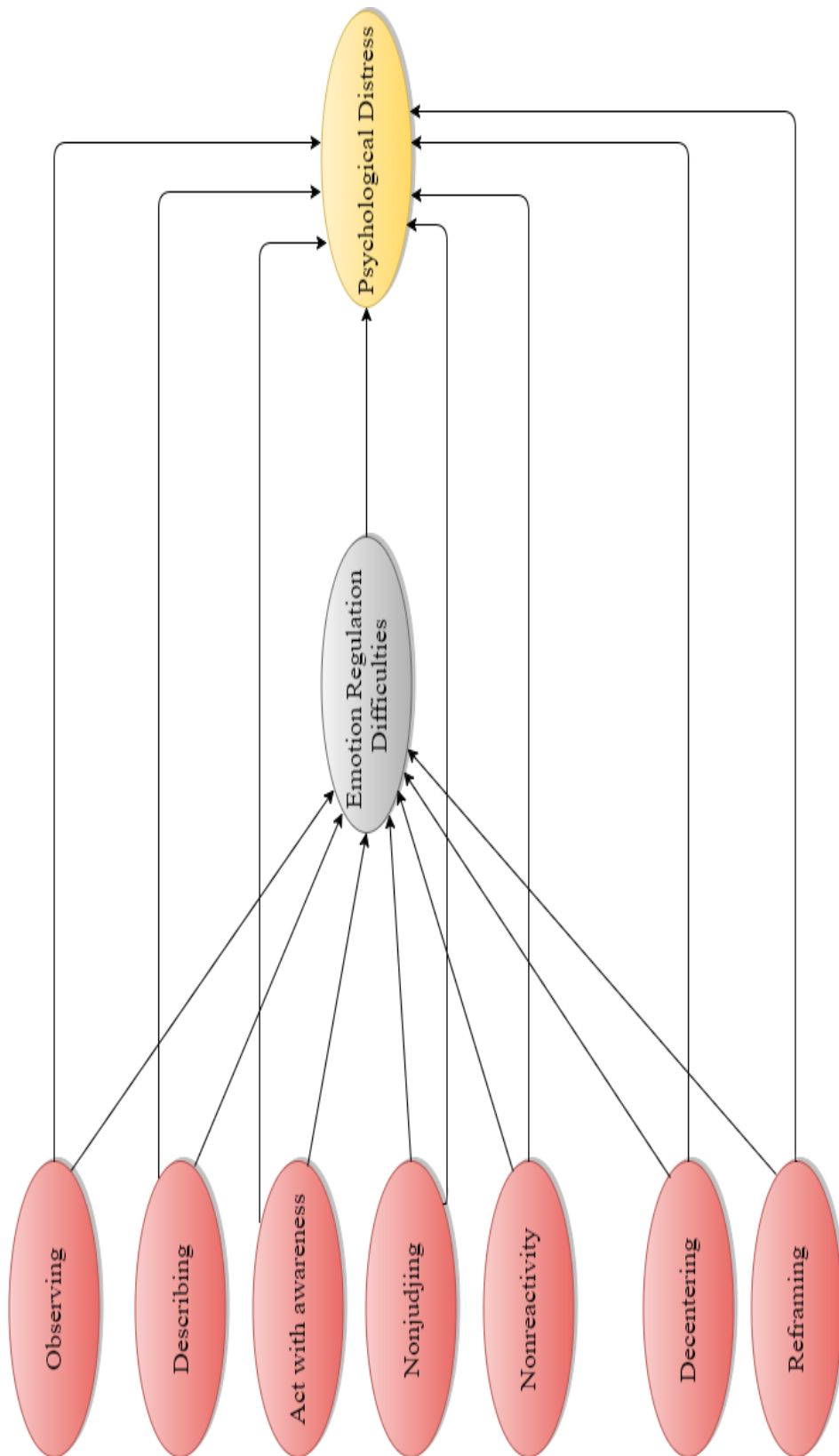
## **1.2 Purpose of the Study**

The main aim of the study is to examine the relationship between five facets of mindfulness (observing, describing, acting with awareness, non-judging of experience, and non-reactivity to inner experience), reframing,

decentering and psychological distress with the indirect effect of emotion regulation difficulties.

### **1.2.1 Research Question**

The research question of the present study is “To what extent do five facets of mindfulness (observing, describing, acting with awareness, non-judging of experience, and non-reactivity to inner experience), decentering, and reframing predict psychological distress with the indirect effect of emotion regulation difficulties? Thus, the study aims to test both direct relationships between psychological distress and exogenous variables (five facets of mindfulness, reframing and decentering), and indirect relationships between psychological distress and exogenous variables (five facets of mindfulness, reframing and decentering) through emotion regulation difficulties. The proposed model was presented below with the direct paths.



*Figure 1.1* The hypothesized model for psychological distress

### **1.3 Significance of the Study**

Significance of the present study is explained under three topics. These are significance of the study in terms of theory, research, and practice.

In terms of theory, first, Emotion Regulation Therapy is a new integrated therapy and studies have supported the efficacy of ERT on generalized anxiety disorder and depression (e.g., Fresco, Mennin, Heimberg, & Ritter, 2013; Mennin & Fresco, 2014; Mennin et al., 2015). However, future studies are needed to provide additional evidence for the ERT model (Mennin & Fresco, 2014). Further, Emotion Regulation Therapy has not been examined in published research in Turkey yet. Thus, this study is unique by using Emotion Regulation Therapy as a basic theoretical framework to examine psychological distress among university students in Turkey.

Second, the present study may contribute to understanding more complex relationships with regard to psychological distress. Investigating more complex relationships among variables assist researchers to develop or revise counseling research and theories (Heppner, Wampold, & Kivlighan, 2008); as a result more effective therapies may advance (Gunzler, Chen, Wu, & Zhang, 2013). In the present study, Structural Equation Modeling (SEM) which is an advanced statistical analysis to understand multivariate relationships (Khine, 2013) was used. Thus, this research would explore complex relationships with regard to psychological distress.

Third, one of the purposes of this study is to add to the literature by examining a theoretical model that explains how mindfulness may reduce psychological distress. Although studies examine the mechanisms of the mindfulness (e.g., Shapiro, Carlson, Astin & Freedman, 2006; Coffey, & Hartman, 2008), factors leading to the beneficial outcomes of mindfulness are still unclear (Sauer, & Baer, 2010). Thus, this study may be beneficial to understand those factors.

In terms of research, one of the aims of the present study is to examine the psychometric properties of the Experiences Questionnaire (EQ; Fresco et al., 2007) in Turkey. EQ has been used to measure decentering with both undergraduate students and clinical sample (Fresco et al., 2007). Moreover, Experiences Questionnaire (EQ) has been conducted on different cultural groups such as German (Gecht et al., 2014), Japanese (Kurihara, Hasegawa, & Nedate, 2011) and Spanish (Soler et al., 2014). Moreover, decentering has been measured with instruments which assess decentering related constructs such as Measure of Awareness and Coping in Autobiographical Memory (MACAM; Moore, Hayhurst, & Teasdale, 1996), but the Experiences Questionnaire (EQ) gives an opportunity to measure decentering more specifically (Fresco et al., 2007). Thus, adapting the EQ can assist both practitioners and researchers to gain more insight about decentering in Turkey. The existing Turkish literature on decentering also can be advanced.

The direct relationships between five facets of mindfulness, reframing, decentering, emotion regulation difficulties and psychological distress have been examined in the literature. However, there has been lack of research investigating indirect relationships that might provide alternative explanations for psychological distress among university students. In the present study, with the help of the proposed psychological distress model, both direct and indirect relationships are to be examined.

In Turkey, mindfulness became popular research topic in recent years. Studies conducted in Turkey have measured mindfulness as a single factor (e.g., Albayrak, 2015; Kocaefe, 2013; Özyeşil, 2011; Ülev, 2014). On the contrary, number of research in the literature suggested that mindfulness is not a single factor, but it is a multifaceted construct (e.g., Baer et al., 2006; Cardaciotto et al., 2008). In the present study, mindfulness is also measured as multifaceted

construct. Therefore, it is hoped that with this emphasis, the present study will have contribution the mindfulness literature.

In terms of practice, the present study aimed to enlighten factors related to psychological distress. Due to rise of psychological distress among university students, studies emphasize the significance of developing preventive services on college campuses (Kessler et al., 2005; Stallman, 2010). In the proposed psychological distress model, increasing mindfulness, decentering and reframing are regarded as potential protective factors to reduce emotion regulation difficulties and psychological distress. Therefore, it is hoped that the present study will provide valuable information about buffer effects of those variables on psychological distress. Moreover, investigating which dimensions of mindfulness have the most critical impact on psychological distress may guide practitioners at university counseling centers in preparing mindfulness based intervention programs to decrease distress among students.

University counseling centers have a vital role to help students to support their psychological well-being, but while doing that, counselors have to pay close attention on today's university students' needs (Bland et al., 2012; Neilans, 2007; Kitzrow, 2003). Contemporary approaches like Emotion Regulation Therapy may help to answer the needs of today's university students. Further, Emotion Regulation Therapy is an approach mainly used in individual counseling. In university counseling centers, counselors spent most of their time for individual counseling because it is the most requested service by university students (Sharkin, 2012). Taken together, testing a model among university students based on a contemporary approach which aimed to offer individual counseling can offer significant contributions to practitioners working at university counseling centers.

#### **1.4 Definitions of the Terms**

*Psychological Distress* refers to an unpleasant subjective state characterized by symptoms of depression and anxiety (Mirowsky & Ross, 2002).

*Emotion Regulation Difficulties* is defined as having difficulty to regulate or change emotions under normal conditions (Linehan, Bohus, & Lynch, 2007).

*Decentering* is defined as the ability to observe thoughts and feelings as objective and temporary events in the mind rather than as absolute truths (Fresco et al., 2007).

*Reframing* refers to change the way one's evaluation of an event to alter its emotional impact (Gross, 1998).

*Mindfulness* refers to “the awareness that emerges through paying attention on purpose, in the present moment and nonjudgmentally to the unfolding of experience moment by moment” (Kabat-Zinn, 2003, p. 145). According to Baer et al., (2006) mindfulness is identified as a multifaceted construct including observing, describing, acting with awareness, non-judging of inner experience, and non-reactivity to inner experience.

*Observing* is defined as being aware of internal and external experiences such as cognitions, emotions, sounds, and smells.

*Describing* is defined as being able to express internal experiences with words.

*Acting with awareness* is defined as paying attention to one's activities of the moment rather than reacting automatically.

*Non-judging of Inner Experience* is defined as the ability to be non-evaluative toward thoughts and feelings.

*Non-reactivity to Inner Experience* is also defined as the tendency to allow thoughts and feelings to come and go, without getting caught up in them.



## **CHAPTER 2**

### **LITERATURE REVIEW**

In this chapter, the review of the related literature was provided. Firstly, theoretical framework of the study was explained. Secondly, the definition of psychological distress was briefly explained and the study findings regarding psychological distress among university students were summarized. The chapter continued with the major research findings concerning the proposed model variables. Lastly, the summary of the literature review was presented.

#### **2.1 Theoretical Framework of the Study**

Throughout history, individuals have tried to explore the causes of distress to relieve it. Several theories also have provided explanations about psychological distress (e.g., Psychodynamic Therapy, Interpersonal Theory). Among theories, Cognitive Behavioral Therapy (CBT), originally defined as cognitive therapy, and developed by Aeron Beck at the beginning of the 1960s, has come into prominence in terms of relief psychological distress. According to Cognitive Behavioral Therapy (CBT), distress occurs because of inaccurate or un-helpful ideas about individuals' experiences and the important point in therapy is to change those thoughts to alleviate distress (Beck, 2011).

CBT is a very dynamic approach, in which new directions have added by some therapists and researchers (Herbert & Forman, 2011; Sharf, 2012). Two of those directions are acceptance and mindfulness which have brought crucial changes to cognitive behavioral therapies (Hayes, 2004; Herbert & Forman; 2011). Hayes (2004) has explained changes by dividing the history of CBT into

three generations. The theories which focus on behavior changes are in the first generation such as classical and operant conditioning. Second generation has stressed the change of dysfunctional thoughts such as Rational Emotive Therapy and Beck Cognitive Therapy. Lastly, third generation has included theories which emphasize the importance of acceptance and mindfulness in therapy. Therefore, CBT is evaluated as an extended family of theories including both traditional and contemporary cognitive behavioral theories rather than indicating a specific theory (Forman & Herbert, 2009). Moreover, mindfulness and acceptance based theories are defined as “third wave” of cognitive behavioral therapy (Hayes, 2004).

In the following section, Mindfulness Based Cognitive Therapy (MBCT; Teasdale et al., 1995), Dialectical Behavior Therapy (DBT; Linehan, 1993), and Acceptance and Commitment Therapy (ACT; Hayes et al., 1999), which are mostly known and empirically supported theories in the third generation of CBT, will be briefly described, but before explaining these theories Mindfulness Based Stress Reduction (MBSR; Kabat-Zinn, 1982) which is the first therapy model using mindfulness in western therapy will be described. After all that, Emotion Regulation Therapy (ERT) which is also a new therapy that integrates cognitive behavioral treatments and mindfulness based treatments with affect science will be presented as a basic theoretical framework of the study.

### **2.1.1 Mindfulness Based Therapies**

*Mindfulness-Based Stress Reduction (MBSR)*: MBSR was developed by Kabat-Zinn in 1979 (Kabat-Zinn, 2013). MBSR was initially offered in hospital settings to individuals who were suffering from chronic pain (Mace, 2008). The general aim of the MBSR is to help individuals to become mindful in their lives (Kabat-Zinn, 2013). To achieve this goal, MBSR teaches participants to practice mindfulness meditation with a group size varying between 10 and 40

participants (Brantley, 2005). The group meets once a week for 8 weeks, and each session takes 2-2.5 hours. There is also an all-day session throughout the program. Program includes psychoeducation about factors which trigger and maintain stress, self-monitoring exercises, formal meditations (e.g., body scan, Hatha Yoga, and sitting meditation) (Kabat-Zinn, 1990; Mace, 2008). The program also focuses on practices to be mindful in daily life such as mindful walking, eating, and talking (Kaba-Zinn, 1990; Salmon, Sephton, & Dreeben, 2011).

The efficacy of MBSR on wide range of problems has been validated in the studies. For example, MBSR has been found as effective on pain reduction, and affect improvement among chronic patients (Kabat-Zinn, 1982), and also effective on hostility, self-esteem, and mood disturbance among inmates (Samuelson, Carmody, Kabat Zinn, & Bratt, 2007). Benefits also have been found among cancer patients in terms of increasing quality of life and decreasing stress symptoms (Carlson, Speca, Patel, & Goodey, 2003), and improving sleep quality, decreasing stress, mood disturbance and fatigue (Carlson & Garland, 2005). Further, Grossman, Niemann, Schmidt, and Walach (2004) conducted a meta-analysis about mindfulness-based stress reduction and health benefits. They revealed that mindfulness based stress reduction improves the ability to cope with distress in everyday life. Neuroscience research on mindfulness conducted by Davidson et al. (2003) also indicated the efficacy of MBSR on stress.

Studies also indicated the efficacy of MBSR among university students. For instance, Rosenzweigh, Reibel, Greeson, Brainard, and Hojat (2003) conducted an experimental study with second year medical student sample (140 students for MBSR group, and 162 students for control group), and results indicated that MBSR is effective intervention to alleviate psychological distress among medical students. Similarly, Shapiro, Schwartz, and Bonner (1998) found that MBSR is effective to reduce psychological distress among medical students.

Oman, Shapiro, Thoresen, Plante, and Flinders (2008) conducted another study among undergraduate students, and they revealed that participants reported less stress and higher forgiveness after MBSR intervention.

*Mindfulness Based Cognitive Therapy (MBCT)*: is a form of MBSR designed to prevent depression relapse by Teasdale et al. (1995). MBCT has added to the MBSR some cognitive skills, and is evaluated as one of the third generations of cognitive behavioral therapy (Mace, 2008). The basic aim of the therapy is to help clients to change one's relationship with the thoughts, feelings which cause depression coming back (Segal et al., 2002). To achieve this goal, mindfulness and decentering are utilized as basic components of therapy (Baer, Walsh, & Lykins, 2009; Segal, Williams, & Teasdale, 2012). Mindfulness is described as an opposite construct of "automatic pilot" in MBCT (Segal et al., 2002). In automatic pilot mode, our bodies do somethings in one place, but our minds are in different place (Sigel, Germer, & Olendzki, 2009). Decentering, which is another important component of therapy, is clarified as a kind of solution for rumination which causes depression relapse (Segal et al., 2012), and it is defined as the ability to observe thoughts and feelings objectively and temporarily (Fresco et al., 2007). Therefore, in MBCT, being here and now, and evaluating thoughts as mental events rather than as absolute truths are crucial to reduce depression relapse (Segal et al., 2012).

In practice, MBCT is an eight session group intervention, and each session takes 2-2.5 hours. Group size is usually 12 participants. MBCT program compromises eight themes which are which are "awareness automatic pilot", "dealing with barriers", "mindfulness of the breath", "staying present", "allowing letting be", "thoughts are not facts", "how can I best take care of myself?", "using what has been learned to deal with future moods" (Segal et al., 2002). In the first four sessions, the focus is on helping clients to learn the basics of mindfulness, and in the next four sessions, the focus on helping clients to change their moods (Segal, Williams, & Teasdale, 2012).

Studies have validated the efficacy of MBCT for the prevention of relapse of recurrent depression (Kuyken et al., 2008; Teasdale et al., 2000). However, MBCT is found as effective for individuals who were currently depressed (Kenny & Williams, 2007), and individuals with generalized anxiety disorder (Evans, Ferrando, Findler, Stowell, & Haglin, 2008). Moreover, Hofmann, Sawyer, Witt, and Oh (2010) conducted a meta-analysis about the effect of MBCT on anxiety and depression. After the review of 39 studies totaling 1,140 participants receiving MBCT, they suggested that MBCT is a favorable intervention for anxiety and emotional problems in clinical populations. Collard, Avny, and Boniwell (2009) also examined the impact of MBCT program among 15 university students at the department of counselling by using pre-test and post-test within group experimental study. They revealed that MBCT was effective program to reduce negative affect, and increase mindfulness, but MBCT was not found effective on the students' level of subjective well-being and positive affect.

*Dialectical Behavior Therapy (DBT)*: was developed by Marsha Linehan in 1970s for suicidal individual with borderline personality disorder (Mace, 2008). DBT is another third generations of CBT (Roemer & Orsilla, 2009). It combines the principles of dialectics, Zen philosophy, and biosocial theory of emotion (Robins, Schmit III, & Linehan, 2011). The aim of therapy is to help clients to accept their current state and environment, and make changes in their thoughts, feelings, behaviors, and environment. Thus, DBT integrates acceptance and change based on the dialectic observation that refers to all points of view have its contradictions (Robins & Rosenthal, 2011; Robins et al., 2011).

In practice, DBT is both individual and group based therapy. To help clients, four treatment methods are used. These are group skills training, individual psychotherapy, telephone coaching, and consultation team meetings (Robins,

& Rosenthal, 2011). The skills used in DBT are acceptance skills (mindfulness and distress tolerance) and change skills (regulation of emotions and interpersonal effectiveness) (Mace, 2008).

DBT is very effective treatment for borderline personality disorder (Linehan et al., 1999; Sweenson, 2000). DBT is also studied among clients with other psychological problems. For example, DBT has been found effective intervention for depression (Lynch, Morse, Mendelson, & Robins, 2003), substance abuse (van den Bosch, Verheul, Schippers, & van den Brink, 2002), and binge eating disorder (Telch, Agras, & Linehan, 2001). DBT is also tested among university students. Pistorello, Fruzzetti, MacLane, Gallop, and Iverson (2012) examined the efficacy of dialectical behavior therapy among a group of university students with suicidality. Results indicated that participants receiving DBT intervention had lower level of suicidality, depression, non-suicidal self-injurious, psychotropic drug use, and they had greater social adjustment than the control group. Fleming, McMahon, Moran, Peterson, and Dreessen (2015) investigated the efficacy of DBT among college students with Attention Deficit Hyperactivity Disorder (ADHD). Findings revealed that DBT is effective treatment to reduce symptoms of ADHD among college students.

*Acceptance and Commitment Therapy (ACT)*: was developed by Hayes et al. (1999), based on relational frame theory. The general goal of this therapy is to increase psychological flexibility, which refers to being here and now to connect with the experienced situation, and being flexible to choose a behavior for a valued life, with six core processes (Hayes et al., 1999). These are acceptance (the ability to be willing to experience what one is experiencing without being defensive), cognitive defusion (the ability to see thoughts and feelings as what they are), being present (being aware of things around us such as feelings, smells, and sounds), self as context (the ability to realize self as constant and stable), values (chosen life directions) and committed action (behaving according to values) (Hayes et al., 1999; Hayes, Luoma, Bond,

Masuda, & Lillis, 2006). These six core process promotes psychological flexibility and the problem in one or more of them may cause psychological rigidity (Hayes, Strosahl, & Wilson, 2012).

ACT evaluates suffering as a natural part of life, and ACT claims that rather than avoid from suffering, acceptance gives rise to happiness (Hayes, et al., 2012). Thus, it aims to help clients to understand that control is a problem rather than a solution (Hayes, 2004). Language is another important part of therapy, and according to ACT, language cause both achievement and sadness (Hayes et al., 2012). Therefore, ACT helps clients to realize what they say themselves, and actually what their feelings and thoughts as they are (Hayes et al., 1999; Hayes, 2004). More broadly, ACT generally focuses on acceptance, mindfulness, commitment and behavior change (Hayes, 2004). Moreover, metaphors, stories, behavioral tasks, defusion and mindfulness techniques are used in therapy (Hayes, 2004). ACT is both individual and group based therapy, and the duration of ACT varies from one day to sixteen weeks.

Studies support the efficacy of ACT across the broad range of issues. For example, ACT found effective for depression (Walser, Karlin, Trockel, Mazina, & Taylor, 2013), cronic pain (Wetherell et al., 2011), post-traumatic stress disorder (Orsillo & Batten, 2005), and workplace stress (Bannon, 2010). Moreover, Ruiz (2010) reported a review of ACT model, and he stated that the review of correlational, experimental, outcome and case studies support the ACT model. ACT related studies also conducted among college students. For instance, Levin, Pistorello, Seeley and Hayes (2014) investigated the efficacy of web-based ACT among university students. They stated that ACT is effective program to reduce psychological distress among university students. Zettle (2003) examined the efficacy of ACT on math anxiety among university students by comparing systematic desensitization method. Results indicated that both of them are effective to reduce math anxiety, but there are not

significant differences between ACT and systematic desensitization group on participant's math anxiety.

The similarities and differences between these approaches have been explained by Brown et al. (2007). These are; (1) both MBSR and MBCT focus on mindfulness improvement as an essential element of therapy, but for ACT and DBT, mindfulness improvement is an element of treatment, (2) MBCT, DBT and ACT use non-meditative exercises to enhance awareness of thought, emotion, somatic sensation and behavior, (3) MBSR and MBCT are group based, and they have eight or ten weeks sessions, but DBT and ACT are both group and individual based and the duration of DBT is approximately one year, (4) MBCT is designed for chronic depression, DBT is designed for borderline personality disorder; however, MBSR and ACT have also been applied to healthy populations.

Mindfulness based therapies have some similarities and differences, but they all have significant implication on general psychological health. Considering mindfulness based therapies, a new integrated therapy, emotion regulation therapy, was developed (Mennin & Fresco, 2009). The following section presents the emotion regulation therapy.

### **2.1.2 Emotion Regulation Therapy**

Emotion regulation therapy (ERT) is a new theoretical model developed in 2009 by Douglas S. Mennin and David M. Fresco. ERT integrates traditional and contemporary CBT principles and practices with basic and translational findings from affect science. Thus, it brings together cognitive behavioral treatments (e.g., self-monitoring, reframing), mindfulness based treatments (e.g., mindfulness exercises) and emotion focused treatments (e.g., skills training, experiential exercises) (Mennin & Fresco, 2009, 2014). ERT is an



individual intervention and consists of 16 sessions over 20 weeks (Mennin & Fresco, 2009, 2014).

Although ERT is originally applied to individuals struggling with generalized anxiety disorders (e.g., Mennin, 2004; Fresco et. al., 2013), the aim of ERT is also to help individuals with distress (Mennin & Fresco, 2014, 2015). According to ERT perspective, distress occurs because of emotion generation (2) having problem regulating emotions, and (3) narrowed behavioral repertoires (Mennin, Heimberg, Turk, & Fresco, 2005). Thus, ERT focuses on cognitive, emotional, and contextual factors that may cause dysfunctional responses (Mennin, 2006), and delineates three target mechanisms which are (1) motivation, (2) emotion regulation, and (3) contextual learning (Mennin & Fresco, 2014).

The first of target mechanisms is motivation. The concept of motivation has been explained by several theorists. In ERT, motivation which gives information about what is important for individuals and moves them to do something is explained with “orchestra” metaphor (Mennin & Fresco, 2014). The emotions are like the different instruments and the overall composition is motivations, so emotions are clues to what motivates people. The two main motivation systems are also defined in the approach. These are “reward system” and “security system” (Mennin & Fresco, 2015). Reward system moves individuals towards rewarding stimuli or to minimize loss. On the other hand, security system activates avoidance of unusual, potentially threatening, or painful stimuli (Mennin & Fresco, 2014). Both of these motivation systems can be important for the same situation or concern, but the critical point is to understand which motivation system is salient (Mennin & Fresco, 2014). For instance, a person who would like to apply for a job can be motivated to be successful, at the same time she or he can be motivated to avoid applying a job because he or she is scared of failure.

According to ERT perspective, individuals with distress experience more motivational conflict and more difficulties resolving motivational conflicts than others, and they frequently concentrate on security system, and they ignore reward system (Mennin & Fresco, 2014). Thus, ERT help clients to increase motivational awareness skills through psychoeducation of motivations and some exercises for improved detecting and attending to motivational cues.

The second mechanisms of ERT, emotion regulation, focus on four emotion regulation skills which are attending, allowing, decentering, and reframing. Both attending and allowing drawn from mindfulness, and attending refers to the ability to focus attention and flexibly move attention, and allowance refers to maintaining contact with emotional experiences and being fully present without being judgmental (Mennin & Fresco, 2014). Decentering is defined as observing thoughts and feelings as objective and temporary rather than as absolute truths (Fresco et al., 2007). Reframing has been defined as altering individual's evaluation of an event to change its emotional impact (Gross, 2002). Moreover, in ERT, emotion dysregulation is not a changeless situation, with appropriate training emotion regulation capacities can be grown (Mennin & Fresco, 2014). To increase emotion regulation capacities of clients, mindful-attending training, three-minute breathing space, and mountain meditation, courageous and compassionate reframing techniques have been used in ERT. The second mechanism investigated in the present study.

Contextual learning that addresses the promotion of broad and flexible behavioral repertoires for a valued life is the third and final mechanism in ERT (Fresco et al., 2013). This mechanism mostly draws from ACT (Hayes et al., 1999) and exposure therapy (Elliot, Watson, Goldman, & Greenberg, 2004; Greenberg 2002).

Contextual learning is consistent with ACT (Hayes et al., 1999) because both of them focus on the importance of values which refer a person's highest

priorities and most important principles (Mennin & Fresco, 2014). Through the lens of ERT, individuals with distress often exhibit inflexible and dysfunctional responses because of deficit in motivation and regulation mechanisms, and thereby experience difficulties to develop new learning repertoire to live a valued life (Mennin & Fresco, 2009; Mennin & Fresco, 2014). For instance, a person who concentrates on security motivation may have difficulties to take risk to live according to his or her values. Focusing only on certain aspects (e.g., only security focus) may cause some problems such as poorer social network, limited meaningful action; however, these narrowed behavioral repertoires become a habit because of negative reinforcement, so the opportunity to have a meaningful life decreases for them (Fresco et. al., 2013). Therefore, ERT helps clients to increase new learning and behavioral adaptation for living a valued life by using simultaneous exposure to rewarding in risky contexts (Mennin & Fresco, 2015). Values delineation, experiential imagery and conflict dialogue exercises and valued action homework are used in therapy process (Mennin & Fresco, 2014).

Preliminary empirical studies have supported the efficacy of ERT (e.g., Fresco, et al., 2013; Mennin & Fresco, 2014; Mennin et al., 2015). First of all, in a case study, a preliminary version of ERT was applied to a woman with generalized anxiety disorder, and at the end of the therapy, the client stated a significant reduction in her anxiety level (Mennin, 2004). Moreover, Mennin (2004) stated that ERT helps to improve emotion regulation problems and help to increase the level of well-being.

In another study, Mennin et al. (2015) investigated the effects of ERT on generalized anxiety disorder with and without major depression. The sample of this study composed of twenty-one clients (at least 18 years old) with generalized anxiety disorder comorbid with and without major depression. Participants received ERT delivered in weekly individual sessions. Self-report measures were used before, during, and after the treatment. Post treatment was

also assessed in three to nine month follow-ups. Results suggested that participants who received ERT indicated significant reductions in their worry, trait anxious, and depression symptoms. Moreover, clients reported significantly higher mindfulness, decentering, and reframing after receiving ERT.

Mennin and Fresco who developed ERT stated that they are currently examining neural changes related to ERT, and developing a portable computer based “emotion regulation training” to target mechanisms of ERT (Mennin & Fresco, 2014). Although ERT is a new integrated therapy, studies are promising. Therefore, future studies are needed to provide additional evidence for the ERT therapy model (Mennin & Fresco, 2014).

## **2.2 Study Variables**

In current study, emotion regulation which is one of the ERT model mechanisms was investigated because it is not practical to test the full model of ERT in a single study. Based on the theoretical framework of the study; to examine psychological distress, mindfulness, decentering and reframing were selected as exogenous variables, and emotion regulation was selected as a mediator variable. Therefore, the following part of the literature review will focus on the major research findings concerning the proposed model variables.

### **2.2.1 Psychological Distress**

The current literature includes some definitions of psychological distress, but the explanation of psychological distress is still vague or describing it as concrete terms is difficult (Drapeau, Marchand, & Beaulieu-Prévost, 2012). Dohrenwend, Shrout, Egri, and Mendelsohn (1980) defined psychological distress as a non-specific psychological problem. Veit and Ware (1983) conceptualized psychological distress with three factors which are (1) loss of

emotional and behavioral control, (2) symptoms of depression and (2) anxiety. In the last decades, psychological distress has been defined as an unpleasant subjective state characterized by symptoms of depression (e.g., feeling of sadness, a loss of interest in normal life activities, feeling very fatigued, diminished ability to concentrate and problems with sleep) and symptoms of anxiety (e.g., fatigue, restlessness, irritability and worried) (Mirowsky & Ross, 2002). Wheaton (2007) also refers to psychological distress as symptoms of depression and anxiety. Another definition of psychological distress is “The unique discomforting, emotional state experienced by an individual in response to a specific stressor or demand that results in harm, either temporary or permanent, to the person” (Ridner, 2004, p. 539). Moreover, the term “psychological distress” is frequently used in literature to state emotional suffering (e.g., Drapeau et al., 2012; Wheaton, 2007). Based on these considerations, psychological distress is operationalized in the present study by using the Depression Anxiety and Stress Scale (Loviband & Lovibond, 1995). DASS assess the symptoms of depression, anxiety, and stress (Lovibond & Lovibond, 1995). DASS is usually used to measure psychological distress (e.g., Bowlin & Baer, 2012; Henry & Crawford, 2005). General Health Questionnaire (Goldberg & Hillier, 1979), Brief Symptom Inventory (Derogatis, 1992) and the Kessler Psychological Distress Scale (Kessler et al., 2002) are other instruments to measure psychological distress.

Studies on psychological distress have mostly used data from vulnerable populations such as cardiac patients (e.g., West, Rose, & Brewis, 1995), cancer patients (e.g., Baker, Krok-Schoen, & McMillan, 2016), earthquake survivors (e.g., Sumer, Karanci, Berument, & Gunes, 2005), immigrants (e.g., Torres, Alcántara, Rudolph, & Viruell-Fuentes, 2016), and prisoners (e.g., Baidawi, Trotter, & O'Connor, 2016). Studies also have focused on socio-demographic factors such as age (e.g., Hale & Cochran, 1992), gender and marital status (e.g., Krause et al., 1995; Simon, 1992), and income (e.g., Whelan, 1992). Moreover, a vast majority of studies has investigated factors related to

psychological distress such as family cohesion (Farrell, Barness, & Banerjee, 1995), social support (Eurelings-Bontekoe, Diekstra, & Verschuur, 1995), religion, purpose on life (Wang, Koenig, Ma, & Shohaib, 2016), and coping strategies (Meng & D'Arcy, 2016). Similarly, Drapeau et al. (2012) stated that researchers mostly focus on risk and protective factors associated with psychological distress, and they are mostly used cross sectional method in their studies. Therefore, from the very beginning of the research on psychological distress, studies have tried to explore the causes of distress, and factors associated with distress to alleviate or prevent it. In current study, the aim is also to contribute to the relevant literature about factors that provide decrease in psychological distress among university students.

#### ***2.2.1.1 Psychological Distress among University Students***

University students comprise a portion of the population, in particular those who are in their 20s. This stage of life is defined as a transition time from adolescence to adulthood and a time to reflect family values and career goals (Kadison & DiGeronimo, 2004). Arnett (2000) has used the term “emerging adulthood” to define this stage. The emerging adulthood refers to ages of change and exploration, and most people examine the life opportunities open to them and they shape their futures by making choices in love and work at this phase of life.

University years are unique time in life, and offer a lot of opportunities to make change and exploration such as active social life and independent living. However, this time may also be difficult because of financial issues, academic pressure, and demands to be the best, meet parental expectations, deal with cultural, racial pressures and especially developmental issues which are identity development, relationships, sexuality, and interpersonal issues (Kadison & DiGeronimo, 2004). While dealing with these issues, university students become a vulnerable population to psychological distress. For

instance, symptoms of depression, anxiety, and stress are quite commonly seen among university students (Kadison & DiGeronimo; Sharkin, 2012).

In last decades, the problems experienced by students at university counseling centers are becoming increasingly more complex and severe. Benton et al. (2003) conducted a study to examine changes in symptom severity across three time periods (1988 to 1992, 1992 to 1996, and 1996 to 2001). They collected data from 13,257 student clients. The results revealed that symptoms of stress, depression, anxiety and developmental, relationship, and academic problems increased over time. Students who were offered in counselling services in recent time periods had more complex problems. Fink (2014) and Sharkin (2012) also implied that psychological health issues of university students are more diverse and complex compared to past years. Therefore, studying psychological distress among university students deserve more scientific research than in years past.

Studies about the prevalence of psychological distress among university students are also investigated in order to understand the importance of the studying psychological distress among this group. Psychological distress is operationalized with different instruments such as Depression, Anxiety, and Stress Scale (Loviband & Lovibond, 1995) and General Health Questionnaire (Goldberg & Hillier, 1979) in these studies.

Larcombe et al. (2016) examined the prevalence of psychological distress among students by recruiting 5061 Australian university students (58% female) by using DASS-21 to measure psychological distress. According to the results, 25.8% of the students reported severe or extremely severe and 21.8% showed moderate symptoms of psychological distress. Of the participants, 52.4% students experience normal or mild symptoms of psychological distress. They also compared the mean results of the university students with a general population sample from an Australian study (Crawford, Cayley, Lovibond,

Wilson, & Hartley, 2011), they found that DASS scores of participants were significantly higher than general community sample.

Similar to the study by Larcombe et al. (2016), Adlaf et al. (2001) investigated the prevalence of psychological distress with 7,800 Canadian undergraduate students. The authors used GHQ to measure psychological distress and they found that 30% of the students in the sample reported elevated psychological distress. In terms of gender, females stated higher psychological distress than males. The authors also indicated that student's level of distress were significantly higher among students than the general population.

To determine the psychological distress around the globe, Eskin et al. (2016) examined the prevalence of psychological distress and suicidal behavior among 5572 (55.3% female) university students from 12 countries (Austria, China, Iran, Italy, Japan, Jordan, Palestine, Saudi Arabia, Tunisia, Turkey, the UK, and the United States) by using GHQ. They noted that UK included in the study, but data were collected only for suicidal behavior in the UK, not for psychological distress because of practical concern. They found that 33.6 % of the total sample was reported elevated psychological distress. Among countries, Saudi Arabia had highest, and the United States had lowest psychological distress. Moreover, Japan, Jordan, Palestine, Saudi Arabia, Tunisia, and Turkey had elevated psychological distress, and Austria, China, Iran, Italy, and the United States had reduced psychological distress. Other important findings from the study were the significant relationship between psychological distress and suicide ideation and attempts, and the significant psychological differences between males and females. They stated that females reported significantly higher psychological distress than men.

In Turkey, with 1617 participants, Bayram and Bilgel (2008) examined the elevated psychological distress among university students according to DASS. They found that at least 27.1% students experience depression, anxiety and



stress symptoms of moderate severity or above. In terms of gender, females reported more symptoms of anxiety and stress. Demirüstü et al. (2009) conducted a study with 6386 university students, and found that 20.1% students were moderately and 20.4% highly psychologically distressed according to GHQ scores. Findings of the study also indicated that female students have significantly higher psychological distress than males.

In addition to the high prevalence of psychological distress among university students, studies implied that psychological distress has related to other issues such as disability and lower academic achievement (Stallman, 2010), alcohol problems (Geisner et al., 2004), suicide ideation and attempts (Eskin et al., 2016). Kadison and DiGeronimo (2004) also assert that if students are psychologically distressed, they are not going to reach their academic potential. Psychological distress does not only have significant implications on student's psychological health, but also might adverse implications on societies because university students have a significant role in shaping the future of societies. Thus, psychological well-being of students becomes an important issue for universities. According to Kitzrow (2003), universities have responsibility for prevention and treatment of mental health issues. Mowbray et al. (2006) also stated that universities are well positioned to promote psychological health of students because they have several important resources such as health services, residences, social networks, and extracurricular activities. Therefore, universities may be evaluated as a resource for promoting psychological well-being of young people that may be difficult to achieve elsewhere.

In summary, psychological health issues of university students are more diverse and complex than in years past. Studies supported that the prevalence of psychological distress among university students is widespread. Gender differences seem to exist in the experiencing of psychological distress with females reporting higher distress. Universities play an important role to

promote psychological well-being of students. Therefore, psychological distress and related factors need to be examined among university students.

### **2.2.2 Emotion Regulation**

Emotion regulation has been conceptualized as “the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions” (Gross, 1998, p. 275). According to Leahy, Tirsch, and Napolitano (2011), emotion regulation could be considered as any coping strategies that assist individuals to overcome an unwanted intensity of emotion (Leahy et al., 2011). Moreover, Thompson and Calkins (1996) explained emotion regulation as being aware of emotions and understanding emotions, and add that all emotions are functional, and there is no need to control emotions directly. Based on the definitions of emotion regulation in the relevant literature, Gratz and Roemer (2004) have defined emotion regulation with four basic points. These are (1) being aware of emotions, (2) acceptance of emotions, (3) ability to control impulsive behaviors and to behave considering desired goals when experiencing negative emotions and (4) ability to use situationally appropriate emotion regulation strategies flexibly. They also stated that difficulties in emotion regulation occur if any or all of the basic components have been absent. The current literature includes other explanations about difficulties in emotion regulation. According to Linehan, Bohus, and Lynch (2007), emotion dysregulation is being unable to change or regulate emotions under normal conditions. Leahy et al. (2011) describe emotion dysregulation or difficulties in emotion regulation as having problem in dealing with experience or processing emotions. According to Elliot et al. (2004), difficulties in emotion regulation could be considered as (1) inability to access and accept emotions, (2) inability to be aware of adaptive emotions, and (3) inability to overcome strong painful emotions.

Emotions are evaluated as the biologically driven state that gives individuals information about the situation to act according to a particular situation (Gross & Thompson, 2007). For instance, fear may give information about threat or sadness may give message about loss (Greenberg, 2002). Emotions also help individuals to understand our needs, important things for us, and to evaluate our alternatives (Leahy et al., 2011). Although emotions have a crucial role for our actions, emotion regulation is important to behave appropriately to the situation, and is evaluated as the essential part of well-being. For instance, emotion regulation provides working creatively, good social relations, and a good relationship with oneself (Gross & Munoz, 1995). On the other hand, difficulties in emotion regulation may cause many of the psychological problems (e.g., Chambers, Gullone & Allen, 2009; Gross & Munoz, 1995). For instance, emotions may cause symptoms if emotions occur at the inappropriate time and at the wrong intensity level (Gross & Thompson, 2007), and may cause maladaptive behaviors such as substance use and suicidal behaviors (Koerner, 2012). According to Plutchik (2000), emotions may cause symptoms when interpersonal relations are unsatisfactory, strong emotions are in conflict, and parts of the emotion chain are disconnected.

From the theoretical perspective, emotions are seen as an outcome of cognition in traditional cognitive behavioral theories, but in the “third generation” of cognitive behavioral therapy which focuses on mindfulness and acceptance, emotion received most attention (Mennin, 2006). This generation mostly emphasizes the experience of both negative and positive emotions without being defensive (Mennin, 2004). Moreover, in Emotion Focused Therapy (EFT) which integrates person-centered, gestalt, and existential therapies, emotion has been viewed as the foundation of the therapy, and the aim of the therapy is to help clients to increase emotional awareness, improve emotion regulation, and alter emotion with emotion (Elliot et al., 2004; Greenberg, 2002). As seen, not only emotion, but also emotion regulation has emphasized in EFT (Greenberg, 2002). Both mindfulness and acceptance based approaches

and emotion focused therapy have a strong influence on Emotion Regulation Therapy (ERT) (Mennin, 2004). Therefore, ERT has stressed the experience of emotions, even emotions are negative, describing of emotions, acceptance of emotions, regulation of emotions, and using emotional information to live a valued life (Mennin, 2004). According to ERT perspective, individuals with psychological distress experience emotion regulation difficulties and emotion dysregulation occur if individuals have difficulty to regulate emotional experiences appropriately to a particular environment (Mennin & Fresco, 2009). They also add that individual with distress frequently use maladaptive emotion regulation strategies such as rumination, avoidance, self-criticism, reassurance seeking (Fresco et al., 2013).

Studies support the relationship between psychological distress and emotion regulation difficulties. Rugancı and Gençöz (2010) examined the relationship between difficulties in emotion regulation and psychological distress with a sample of 338 students (207 female) from three universities in Ankara, Turkey. They used Brief Symptom Inventory (BSI) to measure psychological distress. They found strong positive relationship between psychological distress and emotion regulation difficulties.

Likewise, with 1045 female university students, Bardeen et al., (2012) found significant and strong relationship between emotion regulation difficulties and psychological distress measured by depression, anxiety and stress scale.

Using a sample of 1050 university students (794 women), Ritschel, Tone, Schoemann, and Lim (2015) reported that there is a significant and strong relationship between emotion regulation difficulties and psychological distress measured by the DASS.

A study by Pepping et al. (2014) explored the association between emotion regulation difficulties and psychosocial distress by using a sample of 639

undergraduate students (483 females). They used Depression, Anxiety, and Stress Scale (Loviband & Lovibond, 1995) and the outcome questionnaire (Lambert et al., 2004). Findings indicated that emotion regulation difficulties positively associated with distress.

The present series of studies focus on the mediator role of emotion regulation in psychological distress. For example, Coffey and Hartman (2008) examined the mediator role of emotion regulation in psychological distress, and findings indicate that emotion regulation is a significant mediator in the relationship between mindfulness and psychological distress. In another study, mediator role of emotion regulation difficulties was studied between attachment style and psychological distress, and the results revealed that psychological distress related to attachment style through emotion regulation difficulties (Rugancı, 2008). Thus, emotion regulation difficulties variable has also served as a mediator in studies.

Further, emotion regulation difficulties are associated with many forms of psychological problems such as chronic worry (Salters-Pedneault, Roemer, Tull, Rucker, & Mennin, 2006), post-traumatic stress disorder (Ehring & Quack, 2010), and generalized anxiety disorder (Roemer et al., 2009). Moreover, Aldao et al. (2010) conducted a meta-analysis about the emotion regulation and psychopathology with 114 studies, and they pointed out a positive relationship between difficulties in emotion regulation and psychopathology.

In terms of gender, studies in the relevant literature mostly have focused on gender differences in emotion regulation strategies (Gross & John, 2003; Nolen-Hoeksema & Aldao, 2011). For instance, Tamres, Janicki and Helgeson (2002) conducted a meta-analysis to examine gender differences in emotion regulation strategies; they found that most types of emotion regulation strategies (e.g., rumination, seeking social support, and suppression) were used

more by women than men. Gender differences in emotion regulation strategies implied that there were not a significant association between gender and overall self-reported emotion regulation difficulties. For examples, Gratz and Roemer (2004) found a non-significant relationship between gender and total score of difficulties in emotion regulation among 357 university students (73% female). Similarly, Rugancı and Gençöz (2010) reported that the total score of emotion regulation difficulties was not different between males and females among 338 university students (61%). Hannan and Orcutt (2013) also found that there were not significant relationship between gender, age and overall emotion regulation difficulties among 358 university students (63% female). Markarian, Pickett, Deveson, and Kanona (2013) found that gender was not associated with overall emotion regulation difficulties among university students.

Emotion regulation is an important part of psychological well-being, and literature review indicated that individuals who experience difficulty in regulating their emotions are likely to experience greater psychological distress. However, in ERT, emotion dysregulation can change with appropriate training and emotion regulation capacity of an individual can be improved (Mennin & Fresco, 2014). Considering ERT, mindfulness, decentering and reframing were clarified as emotion regulation skills, thus emotion regulation difficulties was a mediator between emotion regulation skills (mindfulness, decentering and reframing) and psychological distress in current study.

### **2.2.3 Mindfulness**

Mindfulness is a not new construct. It was used in used in Eastern philosophy 2.500 years ago. In 1979 it was brought in to the Western literature by Kabat-Zinn (Fresco, Flynn, Mennin, & Haigh, 2011; Siegel, Germer, & Olendzki, 2009). Mindfulness is an awareness of being here and now, rather than reacting automatically (Teasdale et al., 1995). Similarly, Germer (2013) defines

mindfulness as being aware of the present moment, but they add that acceptance is another component of mindfulness. They also state that mindfulness is a skill, so everyone can learn to be mindful. Moreover, mindfulness is an inherent capacity of human being (Brown & Ryan, 2003; Kabat-Zinn, 2003; Siegel et al., 2009), and all of us are mindful to one degree or another (Kabat-Zinn, 2003). Brown and Ryan (2003) state that one's inherent tendency and daily capacity in paying attention and having awareness of one's current experience with a non-judgmental stance refers to "dispositional mindfulness".

Definitions of mindfulness indicate that mindfulness has several components, but according to some researchers, mindfulness is a single factor, or should be assessed as a unidimensional construct. For instance, Brown and Ryan (2003) developed Mindful Attention Awareness Scale (MAAS) to measure mindfulness as a single factor. Moreover, Freiburg Mindfulness Inventory (FMI; Buchheld, Grossman, & Walach, 2001), Cognitive and Affective Mindfulness Scale (CAMS; Feldman et al., 2007), Southampton Mindfulness Questionnaire (SMQ; Chadwick, Hember, Mead, Lilley, & Dagnan, 2005) have represented several components of mindfulness, but these measurements are recommended to use total scores as an indicator of mindfulness. Some researchers, on the other hand, suggest that mindfulness is a multifaceted construct. Thus, its' components are recommended to asses separately. For instance, Cardaciotto et al. (2008) developed Philadelphia Mindfulness Scale which has two factors, awareness and acceptance. The authors suggest evaluating those components of mindfulness separately. Furthermore, Baer et al., (2006) developed Five Facet of Mindfulness Questionnaire (FFMQ), and they identified five facets of mindfulness. Observing is defined as being aware of internal and external experiences. Describing is defined as being able to express internal experiences. Acting with awareness is defined as pay attention to the present activities rather than reacting automatically. Non-judging of inner experience refers to taking a non-evaluative stance toward thoughts and

feelings. Non-reactivity to inner experience is also described as the ability to observe thoughts and feelings without reacting them. The authors also recommend to measure components of mindfulness separately. In addition, it could be said that there is a growing tendency to assess mindfulness as a multifaceted construct. And, the explanations about mindfulness indicate that conceptualizing mindfulness as a multifaceted construct may be more appropriate (Baer et al., 2009).

Both as a single factor and as a multifaceted construct, a growing body of literature has focused on the role of mindfulness in psychological health among clinical and nonclinical sample. According to Germer (2004), most people who need to help preoccupied with past or future, and frequently feel guilt and sadness about the past or seem worried about future, so they lost the present time, and this increases the suffering, but being mindful gives individuals a chance to be in the present time rather than focusing on past or future (Germer, 2004). To be in the present time and contact with events as they occur can help individuals to evaluate things more freshly, and to respond to things more objectively and flexibly (Brown et al., 2007), and helps individuals to alleviate pressure and worry (Rogers & Maytan, 2012).

A large body of research has supported the favorable role of mindfulness. For example, mindfulness was found negatively associated with symptoms of depression (Hawley et al., 2013), stress (Oman et al., 2008), anger-hostility (Brown & Ryan, 2003), social anxiety (Roemer et al., 2009), and perfectionism (Short & Mazmanian, 2013). Moreover, mindfulness based interventions have been cited as effective for treating a range of problems such as eating disorders (Baer, Fischer, & Huss, 2005; Telch et al., 2001), borderline personality disorder (Linehan et al., 1999; Sweenson, 2000), and post-traumatic stress disorder (Orsillo & Batten, 2005).



Mindfulness has also been studied with psychological distress that has significant implications on psychological health, and many studies reported the positive contribution of mindfulness on psychological distress. For example, Masuda and Tully (2012) recruited 684 university students (76 % female) and investigated the role of mindfulness on psychological distress. Findings indicate that mindfulness significantly and negatively predict psychological distress. They also stated that females had higher level of distress than males, but in terms of participants' mindfulness scores, there were not significant differences. Age was not related to any variables.

Similar to Masuda and Tully (2012), Parto and Besharat (2011) investigated the relationship between mindfulness and psychological distress. They used The Mental Health Inventory (Veit & Ware, 1983) which consists of 14 items for psychological well-being, and 14 items for psychological distress. They found direct relationships between mindfulness and psychological distress, and mindfulness and psychological well-being among 717 men high school students.

With 414 university students in Turkey, Ülev (2014) examined the relationship between mindfulness and coping styles with symptoms of depression, anxiety and stress. Findings indicated that mindfulness negatively and significantly associated with symptoms of depression, anxiety and stress, and mindfulness significantly predict symptoms of depression, anxiety and stress. In another study in Turkey, Albayrak (2015) investigated the relationship between mindfulness and psychological distress and attachment with 452 university students by using Mindfulness Awareness Scale and Brief Symptom Inventory. Results of the study also illustrated that mindfulness negatively associated with psychological distress.

In terms of facets of mindfulness, Bowlin and Baer (2012) examined the relationships between mindfulness, self-control, and psychological functioning.

They found that except observing, five facets of mindfulness significantly and negatively associated with psychological distress. Findings also indicated that age and gender were not significantly related to any variables.

Bränström, Duncan, and Moskowitz (2011) investigated the relationship between mindfulness, psychological well-being, and perceived health among Swedish individuals ( $N = 1000$ ). Of the participants 59% were female. Results showed that higher levels of mindfulness associated with lower levels of distress and there exists non-significant relationship between observing, perceived stress, and health. They also stated that there was not significant difference between males and females in their total scores of mindfulness, but females had significantly lower scores on acting with awareness, non-judgment, and non-reactivity to inner experience than males, and males had significantly lower scores on observing and describing than females.

In order to investigate the relationship between five facets of mindfulness and emotional problems, Pearson, Lawless, Brown and Bravo (2015) conducted a study with 941 university students (64.3% female), and they distinguished subgroups of college students based on their all facets of mindfulness scores. Results showed that individuals with low mindfulness score have more emotional problems than individuals with high mindfulness score, and except for observing, five facets of mindfulness negatively associated with symptoms of depression and anxiety.

Another study by Slonim, Kientuis, Benedetto and Reece (2015) examined the relationship among self-care, mindfulness, and psychological distress in medical students by recruiting 207 students (139 female). According to canonical correlation results, they found strong relationship between psychological distress and total level of mindfulness. In terms of facets of mindfulness, observing was not significantly associated with psychological distress, describing, awareness, non-judging of inner experience, and non-

reactivity to inner experience were significantly and negatively associated with psychological distress. Moreover, the non-judgmental face of mindfulness was most strongly associated with lower levels of distress. There were not significant differences between males and females in their level of distress, but there was a significant gender differences in the level of awareness and non-reactivity to inner experience subscales of mindfulness. Males had higher score on those scales.

In a more recent study, Jacobs, Wollny, Sim, and Horsch (2016) tested the relationship between mindfulness facets, psychological distress, and multiple health behaviors and mediator role of emotional intelligence. The model tested with 427 German-speaking occupational therapists by using DASS. They found that acting with awareness, and acceptance are significantly and directly related to psychological distress, but observing and describing are not significantly and directly related to psychological distress. They also found partial mediation between acting with awareness, acceptance and psychological distress via emotional intelligence.

In another study, Duan (2016) found negative relationship between mindfulness and psychological distress among 790 participants from communities and universities, but observing subscale was not included while calculating total score of mindfulness in the study because of collecting data from community sample. Findings also indicate significant negative relationships between psychological distress and three facets of mindfulness (describing, acting with awareness, and non-judging of inner experience), and non-significant relationship between non-reacting and psychological distress.

Harnett, Reid, Loxton, and Lee (2016) examined the relationship between motivational systems, mindfulness and psychological distress by using hierarchical regression analysis with 452 university students (72% female). Bivariate correlation showed that observing had a positive relationship with

psychological distress thus, excluding observing subscale, they conducted hierarchical analysis. Findings indicated that four facets of mindfulness significantly and negatively predicted psychological distress. They also examined gender differences on five facets of mindfulness. Findings indicated that males had significantly higher level of non-reactivity to inner experience than females, and there were not any significant differences for other components of mindfulness.

Study conducted about five facets of mindfulness in Turkey by Kinay (2013) examined the psychometric properties of Five Facets of Mindfulness Questionnaire among 465 university students (% 55.3 female), and in that study, the relationships between mindfulness, gender and age were also investigated. Findings revealed that there were not any significant differences of males and females scores in describing, observing, and non-reactivity to inner experience scales, but scores of females on acting with awareness were higher than males, and scores of males' on non-judging of inner experience were significantly higher than females. Findings also revealed that there was not any significant relationship between age and five facets of mindfulness.

As seen, mindfulness has been linked to psychological distress, but the reason of this association might be due to reduced emotion regulation difficulties. In that, mindfulness is evaluated as a form of emotion regulation (Corcoran et al., 2010), and one of the purpose of mindfulness is enhancing adaptive emotion regulation (Chambers et al., 2009). Moreover, from a mindfulness perspective, the important point is changing one's relationship with feelings, rather than changing feelings, so mindfulness emphasizes developing awareness and acceptance of emotions rather than changing emotional experience (Hayes & Feldman, 2004; Corcoran et al., 2010). Further, Nyklicek (2011) offered that mindfulness is not regulation of emotion explicitly such as emotion suppression and cognitive reappraisal, but it provides emotion regulation by decreasing emotion suppression and increasing cognitive reappraisal in a

natural way. In ERT, mindfulness is as an emotion regulation skill, and they use the terminology of “attending” and “allowance” (Mennin & Fresco, 2015).

The role of mindfulness in emotion regulation is supported in studies. Hayes and Feldman (2004) stated that mindfulness practice may enhance emotion regulation abilities because of providing less over engagement (e.g., rumination) and avoidance (e.g., suppression). Feldman et al. (2007) offered that higher mindfulness scores were associated with lower levels of maladaptive emotion regulation, including experiential avoidance, thought suppression, worry, rumination, and overgeneralization among university students. Roemer et al. (2009) offered that mindfulness and emotion regulation difficulties associated with depression, anxiety, stress, and generalized anxiety disorder among urban university students.

With 613 undergraduate students (70% female), and by using five facets of mindfulness questionnaire and brief symptom inventory, Baer et al. (2006) examined the relationship between mindfulness, emotion regulation difficulties and psychological distress. The results of the study illustrated that describing, act with awareness, no judging, non-reactivity significantly and negatively associated with psychological distress; however, observing was not related to psychological distress. Similarly, except for observing, five facets of mindfulness were significantly and negatively associated with emotion regulation difficulties. Further, the link between mindfulness and emotion regulation has been supported with neurocognitive studies (e.g., Creswell, Baldwin, Eisenberger, & Libertman, 2007; Davidson et al., 2003).

In addition to all these, the present series of studies focus on the mediator role of emotion regulation between mindfulness and psychological distress (e.g., Coffey & Hartman, 2008; Nyklicek, 2011). Coffey and Hartman (2008) offered, and tested a model by using structural equation modeling from two independent undergraduate student groups. Samples 1 and 2 consisted of 197

(64.5% female) and 249 participants (66% female). They found that emotion regulation, rumination and non-attachment are significant mediators in the relationship between mindfulness and psychological distress. However, results were different for two samples in terms of the mediators were fully or partially mediate. For the first sample, full mediation was found, and for the second sample, partial mediation was found. Corcoran et al. (2010) also presented a model relating with mindfulness and emotion regulation. According to this model, mindfulness training enhances emotion regulation through the development of increased attentional capacity and decentering.

In another study, Lafferty (2013) examined the relationship between mindfulness, emotion regulation, attention regulation, body awareness, and decentering among 157 university students. Findings indicated that mindfulness was associated with emotion regulation difficulties, attention regulation, body awareness, and decentering. They also found positive relationship between decentering and emotion regulation difficulties. Other crucial result of the study was about mediation analysis. According to the result, total score of emotion regulation difficulties was a significant mediator between mindfulness and alcohol use, and mediation was full. Attention regulation, body awareness, and decentering were not found as significant mediators in the relationship between mindfulness and alcohol use.

Mcdonald, Sherman, Petocz, Kangas, Grant, and Kasparian (2016) conducted a study with 402 university students (334 female), and tested the mediator role of emotion regulation and attachment anxiety between mindfulness and psychological distress by using bootstrap mediation analyses. Findings indicated that both attachment anxiety and emotion regulation difficulties were both significant mediator between mindfulness and psychological distress. They also did not find any significant gender differences for all variables.

In a similar vein, Pepping, Davis, and O'Donovan (2013) examined the mediator role of emotion regulation between mindfulness and attachment with 572 undergraduate students. According to the results, difficulties in emotion regulation difficulties were significant and strong mediator between mindfulness and attachment.

In sum, overall mindfulness has been linked to psychological distress and emotion regulation. Regarding the different facets of mindfulness, there is a need to understand which facets of mindfulness contribute more to psychological health, and which facets of mindfulness improves emotion regulation. Moreover, factors by which mindfulness might influence psychological distress are unclear. The studies reviewed suggest the mediator role of emotion regulation between mindfulness and psychological distress. Thus, by considering literature review and emotion regulation therapy, mindfulness was handled as an independent variable, and operationalized as a multifaceted construct and measured with five facets of mindfulness questionnaire. Moreover emotion regulation difficulties were handled as a mediator factor between five facets of mindfulness and psychological distress in the present study.

#### **2.2.4 Decentering**

Decentering has been described as being able to observe or recognizing thoughts and feelings as objective and temporary events in the mind rather than as absolute truths (Fresco et al., 2007). The term decentering is also evaluated as the synonymous or related to other constructs including defusion, reperiencing and metacognitive awareness. Defusion is generally used in ACT, and refers to weakening the language processes to see thoughts and feelings as what they are (Hayes et al., 1999). Reperiencing refers to observing the contents of the consciousness including thoughts, emotions and bodily sensations (Shapiro et al., 2006). Metacognitive awareness defines as the

process of experiencing negative thoughts and feelings in a decentered viewpoint (Teasdale et al., 2002). In general, decentering and decentering related constructs focus on developing a different relationship with negative thoughts and feelings (Hayes, 2004). Moreover, in a recent study, Bernstein et al. (2015) conducted a literature review to examine the decentering-related constructs. They suggested that decentering-related constructs reflect a common mental phenomenon which serves three interrelated metacognitive processes. These are meta-awareness, disidentification from internal experience, and reduced reactivity to thought content. They also claimed that decentering was most comprehensive than others in terms of capturing these common mental processes.

Decentering is a term that is coming from cognitive therapy (Beck, Rush, Shaw, & Emery, 1979), and it has gained greater importance with mindfulness and acceptance based therapies (Fresco et al., 2007), and evaluated as a common element of all mindfulness based therapies (Baer & Huss, 2008). However, there are different views about decentering in therapies. According to cognitive therapy, decentering is a way to change inaccurate or un-helpful thoughts (Segal et al., 2012). For instance, in CBT, clients learn to see their thoughts from a decentering perspective to discuss their truth value or their usefulness as a primary phase of cognitive change (Hayes, 2004; Herbert & Forman, 2011). Thus, decentering is a first step to change of the thought content in CBT. On the other hand, in mindfulness based therapies, changing thought content may be unnecessary, or may have a limited function in therapy (Hayes, 2004; Sauer & Baer, 2010). Lastly, in Emotion Regulation Therapy (ERT), decentering is handled as an emotion regulation skill, and both decentering and changing thought or reframing has been considered among basic components of therapy (Mennin & Fresco, 2014). Therefore, decentering has few different functioning in theories, but they all highlight the importance of decentering for the therapy.



The role of decentering in many factors has been examined in studies. For instance; Fresco et al. (2007) examined the relationships between decentering and symptoms of depression and anxiety, and coping strategies among 61 university students. Results indicated that decentering was positively associated with reappraisal, and negatively associated with avoidance, rumination, and symptoms of depression and anxiety. Study also compared a clinical sample ( $N = 220$ ) with non-clinical sample ( $N = 50$ ) in terms of their level of decentering. The non-clinical sample had higher level of decentering than clinical sample. In another study, Fresco et al. (2007) investigated the differences in the level of decentering between antidepressant medication treatment group and cognitive therapy group with total 111 participants with major depressive disorder. They used randomization method while forming groups, and controlled participants' baseline scores of decentering. After treatment, participants in CBT group reported higher level of decentering than participants in antidepressant medication treatment group. They also found that participants who reported higher level of decentering in 18 month follow up period reported less relapse of depression. Moreover, Hayes-Skelton and Graham (2013) examined the relationship between decentering, reappraisal, and social anxiety by using structural equation modeling with 1097 university students. They found direct relationship between mindfulness and social anxiety, and between decentering and social anxiety. Findings revealed partial mediation between mindfulness and social anxiety through decentering, and full mediation between reappraisal and social anxiety through decentering. They also found that gender and age were not significantly related to any variable.

In a more recent study, decentering was examined among 352 individuals with chronic pain by McCracken, Barker, and Chilcot (2014). Results indicated that decentering had direct significant relationship with mental health, social functioning, and depression. Indirect effects were found between decentering and mental health, social functioning, and depression through acceptance.

Moreover, they stated that there was not a significant relationship between decentering and physical functioning.

In terms of distress, there are few studies. In one of these studies, Morgan (2015) conducted a study to examine the potential moderator effect of decentering on psychological distress and problem drinking with 349 undergraduate students. The results of this study revealed that decentering is negatively associated with psychological distress measured with DASS, and it was at a large magnitude, but decentering was not found a significant moderator.

In another study, Carmody, Baer, Lykins, and Olendzki (2009) tested a model related to mindfulness, psychological distress and decentering offered by Shapiro et al. (2006). According to this model, mindfulness effects psychological distress via decentering and decentering may facilitate additional mechanisms which are self-regulation, emotional-cognitive-behavioral flexibility, values clarification, and exposure, therefore these mechanisms lead to less psychological distress (Shapiro et al., 2006). Based on the model described by Shapiro et al. (2006), Carmody et al. (2009) examined the effects of an MBSR course on psychological distress with decentering, self-regulation, values clarification, cognitive and behavioral flexibility, and exposure as mediators. The model was not supported, but after combining mindfulness and decentering scores, partial mediator was found for the mediating effect of the self-regulation, values clarification, cognitive and behavioral flexibility, and exposure on psychological distress.

Similar to the Shapiro et al. (2006) study, Pearson et al. (2015) examined the relationships between mindfulness, decentering, purpose in life (values clarification), psychological distress and alcohol related problems with 1277 university students. Results of the structural equation modeling indicated that decentering and purpose in life are partial mediators of the associations

between trait mindfulness and psychological distress and alcohol-related problems. Gecht et al. (2014) also tested a mediational model with 495 university students, and found that decentering was a significant mediator between mindfulness and symptoms of depression.

In addition to all these, there has been a lack of research about relationship between age, gender and decentering because studies mostly examined decentering in experimental study design. However, studies conducted about those points revealed that gender and age are not related to decentering (Hayes-Skelton & Graham, 2013; Gecht et al., 2014; McCracken, Gutierrez-Martinez, & Smyth, 2012).

In summary, reviewed of the literature suggests that decentering is an important part of psychological health. However, there is not enough research about psychological distress and decentering among university students. Moreover, some studies evaluate decentering as a mediator between mindfulness and psychological distress, and others claim that decentering facilitates additional mechanisms such as emotion regulation and values clarification, and these mechanisms lead to less psychological distress, so there is not clear information about how decentering has been linked with psychological distress. Based on ERT, decentering facilitate emotion regulation and emotion regulation lead to less psychological distress. Thus, in this current study, decentering was an exogenous variable

### **2.2.5 Reframing**

Reframing refers to understand how a situation is usually perceived and then try to find another view, or frame, for the situation (Cormier et al., 2009). One way of the reframing is reappraisal which has been defined as the ability to alter individuals' evaluation of an event to change its emotional impact (Gross, 1998). According to Gross and John (2003), reappraisal is one of the two most

commonly used emotion regulation strategies, and the other one is suppression (stopping or reducing ongoing emotion expressive behavior). Reappraisal is positively related to psychological well-being; in contrast, suppression is negatively related to psychological well-being, so reappraisal is a positive emotion regulation strategy (Gross & John, 2003).

Similar to the study by Gross and John (2003), emotion regulation therapy evaluates reappraisal as an emotion regulation strategy, and protective factor against psychopathology, so ERT aims to help clients to increase reappraisal skills by offering several strategies. The efficacy of ERT on reappraisal was tested by Mennin et al. (2015), and the result revealed that reappraisal skills of clients significantly increased after receiving ERT, and significant reductions in symptoms of depression and anxiety were reported, and improvements seen on quality of life.

Literature review related to reappraisal also supported the proposed role of reappraisal in emotion regulation therapy. For example, Beath et al. (2015) examined the relationship between psychological distress and reappraisal among adults ( $N = 423$ , 56% female). Findings indicated that reappraisal negatively associated with psychological distress, and emotional intelligence predicted psychological distress via reappraisal.

In another study, Garnefski et al. (2002) examined the relationship between cognitive emotion regulation strategies and emotional problems by comparing a clinical ( $N = 99$ , 52 female) and nonclinical sample ( $N = 99$ , 52 female). They found that positive reappraisal was reported significantly more often by the non-clinical sample than clinical sample. They suggested that reappraisal may be an important part of prevention and intervention of emotional problems. Garnefski, Kraaij, and Spinhoven (2001) also examined the relationship between reappraisal and emotional problems among 547 high school students.

They found that there was a negative relationship between reappraisal and symptoms of depression and anxiety.

In a similar vein, with 216 undergraduate psychology students (67% female), De Castella et al. (2013) examined the relationship between belief about emotion, reappraisal, psychological distress, and well-being. The study found that significant correlations with reappraisal, well-being, and psychological distress. Mediator role of reappraisal between implicit beliefs and psychological distress was found significant in the same study.

Keng (2012) explained mindfulness and reappraisal as emotion regulation strategies, and conducted an experimental study to compare mindfulness training group, reappraisal training group and control group recruiting 129 adults. Each of these groups consisted of 42 participants. Results showed that mindfulness training and reappraisal training groups were higher than no training group and equivalent in their effects in lowering sad moods. Mindfulness training group was better than reappraisal training group in terms of acceptance of negative experiences and decreases in maladaptive beliefs about rumination.

In a cross-cultural study conducted by Talasman (2013), differences in psychological distress and emotion regulation strategies between Turkish ( $N=98$ ) and American participants ( $N = 102$ ) were examined. Findings indicated that reappraisal was negatively correlated with depression, somatization and anxiety, and Turkish participants had significantly more overall distress than American participants. Furthermore, there were no significant differences between American and Turkish participants in either of the emotion regulation strategies.

With 91 undergraduate students (71% female), Shiota (2006) examined the positive coping strategies to predict subjective well-being. Researcher wanted

participants to state the most negative event of the day and their emotion regulation strategies for the next 7 days and participants also completed well-being measures. Findings indicated that well-being was significantly and positively correlated with the reappraisal.

The positive role of reappraisal supported in a lot of studies, but some researchers asserted that given the prominence of reappraisal in studies seems exaggerated. For instance, Sauer and Baer (2010) expressed that cognitive change or reappraisal may be unnecessary in therapy, and according to Corcoran et al. (2010), and Hayes and Feldman (2004), the important point is altering one's relationship to thoughts and feelings, rather than changing content of thoughts and feelings. Furthermore, Aldao et al. (2010) conducted a meta-analysis about the emotion regulation strategies. After the review of 114 studies combined with 241 effect sizes, the authors found a large or medium effect size for rumination, avoidance, problem solving, and suppression. However, for reappraisal, small effect size was found. They stated that these results were unexpected because cognitive-behavioral therapy and acceptance-based treatments mostly focus on reappraisal skill.

In terms of gender and age, studies about reappraisal generally examined the relationship between age and gender. Findings of the studies examining the relationship between gender and age mostly specified the non-significant relationships between reappraisal, gender and age (e.g., Brummer, Stopa, & Bucks, 2014; De Castella et al., 2013; Gross & John, 2003; Talasman, 2013). Thus, results of the studies yielded consistent findings about the relationship between reappraisal, gender, and age.

In summary, reappraisal is an important factor in determining psychological well-being (e.g., John & Gross, 2004; Shiota 2006); but there is a debate about the necessity of reappraisal in therapy (Sauer & Baer, 2010). Furthermore, lack of reappraisal is usually evaluated as emotion dysregulation. Gratz and Roemer

(2004) emphasizes that lack of the specific emotion regulation used by individuals may give little information about emotion dysregulation. In another words, there is a gap in the relevant literature to understand the relationship between reappraisal and emotion regulation difficulties. In the current study, based on the ERT, reappraisal evaluated as an emotion regulation skill, and the relationship between emotion regulation difficulties, reappraisal and psychological distress were examined. It is hoped that the current study may also contribute to existent literature investigating to what extend reappraisal is associated with emotion regulation difficulties and psychological distress.

### **2.3 Summary of the Review of Literature**

In this literature chapter, theoretical framework of the study, the definition of psychological distress, literature reporting about psychological distress among university students, and the major research findings concerning the proposed model variables were provided.

The review of the literature carried out for the current study has revealed that psychological health issues of university students are more diverse and complex than in years past, and the prevalence of psychological distress among university students is widespread. Moreover, universities play an important role to promote psychological well-being of students. Therefore, further studies that investigate the psychological distress and related factors among university students are needed.

Over recent years, studies about distress have enriched with mindfulness, and mindfulness based therapies have significant implications on general psychological health. Emotion Regulation Therapy (ERT) is also a new therapy that integrates cognitive behavioral treatments and mindfulness based treatments with affect science. Although ERT is a new integrated therapy, studies are encouraging. However, future studies are needed to provide

additional evidence for the ERT therapy model. Thus, Emotion Regulation Therapy (ERT) has been selected as the guiding framework of the present study. According to ERT, individuals with psychological distress experience emotion regulation difficulties, and emotion regulation difficulties cause distress. Moreover, emotion regulation mechanism offered that attending, allowing, decentering and reframing increase emotion regulation capacities of individuals. Attending and allowing have been examined as mindfulness in the present study. Indeed, mindfulness, decentering and reframing are important parts of psychological well-being. Further, literature review indicate that individuals who experience difficulty in regulating their emotions are likely to experience greater, and more intense, psychological distress. Thus, based on ERT and the existent research has reported, mindfulness, decentering, reframing and emotion regulation difficulties have been included into the hypothesized psychological distress model in the present study.



## **CHAPTER 3**

### **METHOD**

In this chapter, the methodological procedures of the study were reported. The chapter included six main sections which were the research design, sampling procedure and characteristics of the participants, data collection instruments, data collection procedure, data analysis and potential limitations of the study.

#### **3.1 Research Design**

The main aim of the study was to examine the relationship between five facets of mindfulness, reframing, decentering, and psychological distress mediated by emotion regulation difficulties. Correlational research design was used to test expected relationships among variables. Correlational study is a type of research that investigates the relationship between two or more quantitative variables by using a correlation coefficient (Fraenkel & Wallen, 2006). This type of research design is critical in counseling research for identifying the underlying mechanisms which may be important in counseling interventions (Heppner et al., 2008).

In the present study, Structural Equation Modeling (SEM) was selected as a data analysis technique because SEM is an appropriate technique to understand multivariate relations, and assess direct and indirect effects of variables under study (Khine, 2013). Understanding more complex relationships among variables enhance counselors' understanding, and advance counseling research and theory (Heppner et al., 2008). Therefore, correlational research design with Structural Equation Modeling technique was preferred for the present study.

### 3.2 Participants

While collecting data, convenient sampling method was used instead of random sampling method. Although convenient sampling limit the generalizability of the results, most counseling researchers often use nonrandom samples because of the practical constrains (Heppner et al., 2008).

Through convenient sampling method, data for the present study were collected in a two-phased process, the former was a pilot study for testing psychometric properties of the Experiences Questionnaire, and the latter was for the main study. Data for the pilot study were collected during spring semester of 2013-2014 academic years, and data for the main study were collected during spring semester of 2014-2015 academic year. The information about characteristics of the participants for the main study was presented in this section. For the pilot study, the information about characteristics of the participants was presented under the data collection instruments section.

For the main study, data were collected from 650 undergraduate students. After data screening process, 30 cases with uncompleted pages in the questionnaire booklet were removed from the data set. Therefore, the sample size decreased to 620 undergraduate students as 429 females (69.2%) and 191 males (30.8%). The participants' age ranged between 18 and 30, and the mean age of the sample was 21.88 ( $SD = 1.68$ ). Participants were from different faculties, 59.2 percent were from Faculty of Education ( $N = 367$ ), 21.1 percent were from the Faculty of Engineering ( $N = 131$ ), 11.6 percent were from the Faculty of Arts and Science ( $N = 72$ ), 6.5 percent were from the Faculty of Economic and Administrative Sciences ( $N = 40$ ), and 1.6 percent were from the Faculty of Architecture ( $N=10$ ). The majority of the participants were female, and from Faculty of Education. Although the percentage of female students (69.2%) was not consistent with the proportion of female students in the university, it was consistent with the percentage of female students (75.6%) in the faculty of

education as officially recorded. Therefore, the participants of the study mostly represented the faculty of education. In terms of class, 23.2 percent were freshman ( $N = 144$ ), 15.0 percent were sophomore ( $N = 93$ ), 28.5 percent were junior ( $N = 177$ ), and 32.1 percent were senior ( $N = 199$ ). Besides, 1.1% of students ( $N = 7$ ) did not indicate their class. Grade point average (GPA) ranged between .47 and 3.99 with the mean score of 2.77 ( $SD = .61$ ). According to the university rules, students whose grade point averages are at least 2.00 are considered as satisfactory. Thus, the mean score of participants indicated the satisfactory grade point, and totally 92% participants of the study had satisfactory grade point. The demographic characteristics of the participants were presented in Table 3.1.

Table 3.1  
*Demographic Characteristics of the Participants*

	<i>M</i>	<i>SD</i>	<i>F</i>	<i>%</i>
Gender				
Male			191	30.8
Female			428	69.2
Age	21.88	1.68		
Faculties				
Education			367	59.2
Engineering			131	21.1
Arts and Sciences			72	11.6
Economic and Administrative Sciences			40	6.5
Architecture			10	1.6
Class				
Freshman			144	23.2
Sophomore			93	15.0
Junior			177	28.5
Senior			199	32.1
GPA	2.77	.61		

*Note.*  $N = 620$

In terms of meditation practice, 90.2% ( $N = 559$ ) of participants stated that they did not practice meditation. Of the total participants, only 9.8% of ( $N = 61$ ) stated that they were practicing meditation.

### **3.3 Data Collection Instruments**

Experiences Questionnaire (EQ; Fresco et al., 2007), Depression Anxiety and Stress Scale (DASS; Lovibond & Lovibond, 1995), Five Facet of Mindfulness Questionnaire (FFMQ; Baer et al., 2006), Emotion Regulation Questionnaire (ERQ; Gross & John, 2003), The Difficulties in Emotion Regulation Scale (DERS; Gratz, & Roemer, 2004) were used in the present study. Pilot study was conducted to examine psychometric properties of Experiences Questionnaire. Psychometric properties, reliability and validity studies of the other questionnaires were examined with the data set collected for the main study. Required assumptions to test validity and reliability of the instruments were tested and reported in the results section.

#### **3.3.1 Experiences Questionnaire**

Experiences Questionnaire (EQ; Fresco et al., 2007) was designed to measure both rumination and decentering. EQ-Decentering factor includes 14 items to measure decentering. EQ-Rumination includes 6 items which were used against the response bias (Fresco et al., 2007). The model including two factors was not statistically validated. Rumination factor indicated adequate reliability ( $\alpha = .70$ ), but it was not found empirically a valid instrument (Fresco et al., 2007). Then, Fresco et al. (2007) utilized confirmatory factor analysis with only 14 items which was designed to measure decentering, and the authors dropped items EQ2, EQ5, and EQ8 because of theoretical and statistical considerations. Therefore, EQ-Decentering included 11 items rated on a 5-point Likert-type Scale (1 = Never to 5 = All the time) provided good evidence for the validity (Fresco et al., 2007). Original scale of EQ-Decentering (Fresco

et al., 2007) also showed high internal reliability both in sample of undergraduate students ( $\alpha = .83$ ) and clinical sample ( $\alpha = .90$ ).

The questionnaire has been adapted to several different languages such as German (Gecht et al., 2014), Japanese (Kurihara et al., 2011) and Spanish (Soler et al., 2014). Both in Japanese (Kurihara et al., 2011) and German (Gecht et al., 2014) version of the Experiences Questionnaire, the authors adapted 20 items of EQ to target language, but in Spanish version (Soler et al., 2014), the authors adapted only 11 items of EQ- Decentering. Findings from the psychometric properties of Experience Questionnaire in different languages also indicated that EQ-Decentering is a valid and reliable instrument in both undergraduate students sample and clinical sample.

#### ***3.3.1.1 Pilot Study for the Psychometric Properties of Experiences Questionnaire***

In the present study, the Experience Questionnaire developed to measure both rumination and decentering was adapted to Turkish because the principal author of the measure David M. Fresco suggested the researcher to adapt 20 items of the EQ. Therefore, the adapted scale included both EQ-Decentering (14 items) and EQ-Rumination (6 items) subscales.

##### ***3.3.1.1.1 Translation Procedure of the Experiences Questionnaire***

Before conducting the translation and adaptation of the EQ study, the permission was obtained from David M. Fresco who is one of the developers of the scale. The researcher also obtained approval from the Middle East Technical University Human Subjects Ethics Committee prior to data collection (Appendix A). The Turkish adaptation of EQ was made by considering steps recommended in the study of the next generation of the International Test Commission (ITC) test translation and adaptation guidelines

(Hambleton, 2001). The five steps followed in the scale adaptation procedure were as follows.

First, five bilingual people translated the questionnaire to Turkish. Following the translation process, the best fitted translations of items were selected by the researcher and supervisor. Secondly, three English language experts from school of foreign languages and faculty of education identified and worked on the inadequate expressions in translation of the items as well as any discrepancies between the original form and the translated one. Back translation was a requirement permission agreement offered by David M. Fresco. Thus, back translation of the EQ was conducted by an English Language Instructor. Back translation was checked by the researcher and the adequacy of the translated Turkish form was ensured. Furthermore, the researcher applied the questionnaire to ten undergraduate students to get feedback on the comprehensibility of the EQ items. In their feedback, the students stated that the items including comparative adjectives or adverbs were not clear. That feedback was also applicable because EQ was initially developed to evaluate changes in decentering following Mindfulness Based Cognitive Therapy (MBCT). According to Gecht et al. (2014), to allow the assessment of decentering without prior MBCT interventions, items which include comparative adjectives and adverbs should be positively reformulated. In the study of the psychometric properties of the Experience Questionnaire in a German sample (Gecht et al., 2014), these items were positively reformulated. Thus, in the present study, items including comparative adjectives and adverbs were reformulated after granting permission from David M. Fresco who is one of the developers of the scale. Students also claimed that item 17 (EQ17) on the questionnaire was too abstract. After that, researcher asked students what they understand from EQ17. Explanations from students were compatible with original item content, so the researcher decided not to change item EQ17. Lastly, the final form of Experiences Questionnaire was

formed. Sample items from the Experiences Questionnaire were presented in Appendix C.

While conducting the study, EQ including 20 items were administered to the participants and consent form was given to all participants. The purpose of the study was explained to the participants. The application took approximately 15 minutes. After collecting data, necessary statistical analyses were conducted.

#### ***3.3.1.1.2 Participants for the Pilot Study***

Data were collected from 394 undergraduate students at state university in Ankara. After data screening process, 31 cases were excluded from the data because of missing values (15 cases), and univariate and multivariate outliers (16 cases), and the sample size decreased to 363 undergraduate students. There were 251 females (69%) and 112 males (31%). The participants' age ranged between 18 and 31, and the mean age of the sample was 21.90 ( $SD = 2.27$ ).

#### ***3.3.1.1.3 Confirmatory Factor Analysis Procedure***

Confirmatory factor analysis was utilized to test the unifactorial model of the EQ using the LISREL 8.80 program. The purpose of Confirmatory Factor Analysis (CFA) is to define latent factors that account for the variation and covariation among a set of indicators (Brown, 2006). Explanatory Factor Analysis (EFA) and CFA are based on the common factor model, thus many concepts and terms in EFA such as factor loadings, residuals can apply to CFA (Brown, 2006). However, the specification of CFA is strongly determined by theory or priority research (Kline, 2011). Based on the prior research, Experiences Questionnaire can be considered as a reliable and valid questionnaire (e.g., Fresco et al., 2007; Soler et al., 2014). Thus, confirmatory factor analysis was preferred as an appropriate analysis for the present study.

Before moving on the CFA, the original data file was examined through SPSS version 22 and LISREL version 8.80 for the accuracy of data entry, missing values, outliers, adequacy of sample size, univariate and multivariate normality, linearity and multicollinearity. Accuracy of data entry was checked by minimum and maximum values of the items and checking the data file randomly. No mis-entered data were found. After, missing values were assessed, 15 missing data were found. To deal with missing data, listwise deletion method, which is defined as removing cases with missing value from the sample (Brown, 2006), was used. According to Schafer and Graham (2002), listwise deletion method for dealing with missing value is effective when the sample has a very small missing value and the reason for data loss is completely at random. Missing values were examined and the reason for data loss was concluded that they were by chance. Therefore, 15 cases were deleted from the data file.

After removing missing values, univariate and multivariate outliers were checked. The standardized z scores ( $\pm 3.29$ ; Tabachnick & Fidell, 2013) and box plots were used to determine the univariate outlier, so 12 cases were detected and deleted from the analysis. Using Mahalanobis distance value  $\chi^2(20) = 45.32$ , 4 problematic values had greater than the critical Mahalanobis distance value  $\chi^2$  were identified and deleted from the data set. Therefore, CFA was performed using data from 363 undergraduate students. There were 251 females (69%) and 112 males (31%). The participants age ranged between 18 and 31, and the mean age of the sample was 21.90 ( $SD = 2.27$ ).

According to Tabachnick and Fidel (2013), the adequacy of sample size for factor analysis which is at least 300 cases can be generalized to confirmatory factor analysis. Thus, it is possible to say that the sample size in the present study is adequate for conducting confirmatory factor analysis.



The assumption of univariate normality was checked by evaluating skewness and kurtosis values, histograms, and Q-Q plots of the items. In Table 3.2, the scores of means and standard deviations, and values of skewness and kurtosis of items were presented. As seen, the value of skewness ranged between -2.42 and 0.56, and the value of kurtosis ranged between -3.40 to 0.05. Moreover, the values of skewness and kurtosis were not significant for all items ( $p > .01$ ). Histograms of almost all items indicated us that the distribution was normal, but item EQ1 seemed negatively skewed distribution. When we look at Q-Q plots, the scores were close to line for all items. It was concluded that univariate normality was provided.

Univariate normality assumption was not violated, and then multivariate normality was evaluated. Test of multivariate normality showed significant deviations from multivariate normality (Skewness  $z = 12.94$ ,  $p < .001$ ; Kurtosis  $z = 10.74$ ,  $p < .001$ ; Skewness and Kurtosis = 282.68,  $p < .001$ ), so multivariate normality assumption was violated.

Multicollinearity assumption was checked by using correlation matrix. The highest correlation value was -.50, so there was not any value of correlation between variables higher than .90. According to Field (2009), if there is not any value of correlation between the predictors higher than .90, this was an evidence for no perfect multicollinearity assumption. Linearity assumption was assessed through randomly selected pairs of scatterplots because it was not feasible to examine all pairwise scatterplots. The overall shape of the scatter plot is not oval; the variables are not linearly related.

In conclusion, missing values, outliers, univariate normality and multicollinearity assumptions were provided, but multivariate normality was violated. When non-normality is a case, an estimator other than ML should be used to obtain reliable statistical result (Brown, 2006). Robust maximum likelihood (ML) (Bentler, 1995; Satorra & Bentler, 1994), and weighted least

squares (WLS) (Browne, 1984) are most commonly recommended in that situation. According to Brown (2006), WLS is more appropriate for extremely large sample, so robust ML (Satorra Bentler chi square) was selected for the present study.

Table 3.2

*Descriptive Statistics for 20-Item Turkish EQ: Means, Standard Deviations, Skewness, and Kurtosis (N= 363)*

Item	<i>M</i>	<i>SD</i>	<i>Skewness</i>	<i>Kurtosis</i>
EQ1	4.13	0.74	-2.42	-2.32
EQ2	2.92	0.90	-0.14	-0.22
EQ3	3.88	0.89	-1.98	-1.86
EQ4	3.61	0.85	-0.95	-0.84
EQ5	3.01	0.92	0.05	-0.51
EQ6	2.79	0.92	0.23	-0.69
EQ7	3.41	1.15	-1.09	-3.40
EQ8	2.81	0.94	0.47	-0.89
EQ9	3.02	0.87	0.04	0.00
EQ10	2.74	0.95	0.56	-0.90
EQ11	3.79	0.76	-1.12	-0.34
EQ12	3.56	0.86	-0.69	-0.28
EQ13	3.70	0.92	-1.40	-1.05
EQ14	3.49	0.89	-0.68	-0.82
EQ15	3.19	0.87	-0.30	-0.49
EQ16	3.46	0.79	-1.07	0.05
EQ17	3.46	0.93	-0.10	-0.61
EQ18	3.86	0.80	-1.34	-1.29
EQ19	3.87	0.77	-1.23	-1.22
EQ20	3.95	0.77	-1.56	-1.99
Multivariate Kurtosis				1.107

#### ***3.3.1.1.4 Validity and Reliability of the EQ***

The models were estimated with robust Maximum Likelihood estimation and tested with the Satorra Bentler chi square. While evaluating model, non-meaningful items were excluded from the model. Firstly, item 2 was eliminated because of non-significant  $t$  value. Then, item 4, 11 and 17 (low standardized loading  $< .32$ ) were eliminated from the model because variables with loadings of .32 and above are interpreted as a criterion for meaningful correlation (Tabachnick & Fidel, 2013). After eliminating these items, criteria for an acceptable model fit was not reached. Then, paying attention to theoretical and statistical considerations, item 8 (low standardized loading  $< .40$  (Stevens, 2002) and high standardized residual) was eliminated and the criteria for an acceptable model fit was reached. According to the results, Satorra-Bentler  $\chi^2$  ( $89, N = 363$ ) = 245.96,  $p < .05$ , and dividing the chi-square by the degrees of freedom equals 2.76.  $\chi^2/df$  values lower than 5 were indicative of adequate model fit (Wheaton, Muthen, Alwin, & Summer, 1977), and lower than 3 were also interpreted as good model fit (Kline, 2011). The comparative fit index (CFI) was .91, and NNFI (TLI) was .90. NNFI and CFI values in the range of .90-95 were interpreted in accord with acceptable model fit (Bentler, 1990), and NNFI and CFI values close to .95 were also interpreted as good model fit (Hu & Bentler, 1999). The standardized root mean square residual (SRMR) was .07. The SRMR has a range of possible values of 0.0 to 1.0, with values closer to 0.0 indicating perfect fit (Brown, 2006), and SRMR values lower than .08 were indicative of reasonably good model fit (Hu & Bentler, 1999). RMSEA was .07. Browne and Cudeck (1993) propose that RMSEA values lower than .08 interpreted in accords with acceptable model fit. Therefore, in the present study, confirmatory factor analysis indicated an acceptable model fit sb  $\chi^2 = 2.76$  ( $p < .001$ ),  $CFI = .91$ ,  $SRMR = 0.06$ ,  $RMSEA = 0.07$ , and  $NNFI = 0.90$  (Table 3.3). Standardized loadings of items presented in Table 3.4.

Table 3.3

*Unstandardized and Standardized Parameter Estimates for Two-Factor Model of the EQ (N=363)*

Item	Unstandardiz ed Factor Loadings	Standardiz ed Factor Loadings	<i>t</i>	<i>R</i> <sup>2</sup>
Rumination				
EQ1	.36	.49	7.59	.24
EQ7	.53	.46	6.30	.21
EQ13	.55	.60	8.38	.35
EQ19	.30	.39	5.46	.15
Decentering				
EQ3	.54	.61	13.04	.38
EQ5	.63	.69	13.43	.47
EQ6	.53	.57	10.16	.33
EQ9	.43	.49	8.15	.24
EQ10	.37	.39	6.21	.15
EQ12	.43	.50	8.42	.25
EQ14	.61	.69	13.77	.48
EQ15	.48	.55	10.96	.31
EQ 16.	.26	.33	5.96	.11
EQ 18.	.34	.43	7.95	.19
EQ 20.	.29	.37	6.98	.14

Table 3.4

*Goodness of Fit Indicators of Models for Two-Factor Model of the EQ*

	$\chi^2$	<i>df</i>	$\chi^2/df$	<i>CFI</i>	<i>NNFI</i>	<i>NFI</i>	<i>RMSEA</i>	<i>SRMR</i>
Model	245.96***	89	2.76	.91	.90	.87	.07	.07

Note. \*\*\*  $p < .001$

Reliability was conducted after Confirmatory Factor Analysis. The value of EQ Decentering was  $\alpha = .80$  and the value of EQ-Rumination was  $\alpha = .53$ . According to Hair, Black, Babin, and Anderson (2010), an appropriate rule of

thumb is that reliability should be at least .70, so the value of EQ-Decentering had high reliability, but EQ-Rumination subscale had not an adequate reliability. If a scale is unreliable, it is not legitimate to say that it may be valid (Fraenkel & Wallen, 2006). Thus, EQ-Rumination is not evaluated as a valid subscale. Moreover, providing a compelling rationale that the model is meaningful and useful on the basis of prior research evidence and theory is one of the most important aspects of model evaluation (Brown, 2006). According to prior research, EQ-Rumination factor was not confirmed in the original psychometric properties of Experiences Questionnaire (e.g., Fresco et al., 2007; Gecht et al., 2014), and the reliability value of EQ-Rumination was .70 which is the lower range of “adequate” reliability in the original measure (Fresco et al., 2007). Therefore, EQ-Rumination factor removed from the data file and the model were rerun using only the decentering items.

Firstly, item 2 was eliminated because of non-significant  $t$  value ( $< .1.96$ ). Then, item 17 (low standardized loading  $< .32$ ; Tabacnick, & Fidell, 2013) were eliminated from the model. After eliminating these items, criteria for an acceptable model fit was not reached. Then, paying attention to theoretical and statistical considerations, item 8 (low standardized loading  $< .40$ ; Stewens, 2002) was eliminated and the criteria for an acceptable model fit was reached. As a result, confirmatory factor analysis indicated an acceptable model fit; Satorra-Bentler  $\chi^2/df = 3.05$  ( $p < .001$ ),  $CFI = .94$ ,  $SRMR = 0.06$  and  $NFI = .92$  (Table 3.6). Unstandardized and standardized loadings,  $t$  values and  $R^2$  of items presented in Table 3.5.

Table 3.5

*Unstandardized and Standardized Parameter Estimates for One-Factor Model of the EQ (N=363)*

Items	Unstandardiz ed Factor Loadings	Standardiz ed Factor Loadings	<i>t</i>	<i>R</i> <sup>2</sup>
EQ3	.54	.61	12.82	.37
EQ5	.62	.68	13.09	.46
EQ6	.52	.57	10.07	.33
EQ9	.43	.49	8.10	.24
EQ10	.37	.39	6.11	.15
EQ12	.43	.50	8.16	.25
EQ14	.61	.69	13.73	.48
EQ15	.49	.56	11.07	.31
EQ16	.27	.34	6.07	.11
EQ18	.35	.44	8.14	.20
EQ20	.29	.38	7.19	.14

Table 3.6

*Goodness of Fit Indicators of Models for One-Factor Model of the EQ*

	$\chi^2$	<i>df</i>	$\chi^2/df$	<i>CFI</i>	<i>NNFI</i>	<i>NFI</i>	<i>RMSEA</i>	<i>SRMR</i>
Model	134.52***	44	3.05	.94	.93	.92	.07	.06

*Note.* \*\*\*  $p < .001$

According to results of the analysis, the Turkish version of EQ-Rumination has not strong evidence for construct validity and reliability that is reasonable in the light of the relevant literature (e.g., Fresco et al., 2007; Gecht et al., 2014). However, the Turkish version of EQ-Decentering has strong evidence for construct validity and reliability. There were two differences between the Turkish version of EQ-Decentering and the original measure (Fresco et al., 2007). The first difference was EQ17 (“I can actually see that I am not my thoughts.”) load significantly in the original measure, but in the Turkish version, EQ17 was removed from the model because of its low standardized

loading. As noted in the Experiences Questionnaire Adaptation Process, students claimed that EQ17 was too abstract. After that, researcher asked students what they understand from EQ17. Explanations from students were compatible with original item content, so the researcher decided not to change item EQ17. However, statistical results also showed that EQ17 is inadequate to the intended population. Thus, it is reasonable to remove EQ17 from the Turkish version of Experiences Questionnaire. The second difference was EQ5 (“I am kinder to myself when things go wrong.”) did not load significantly in the original measure; EQ5 loaded significantly in the present study. Except these two differences, the questionnaire confirmed as one-factor structure with acceptable fit indexes, and showed similar psychometric properties of the original measure (Fresco et al., 2007).

### **3.3.2 Depression Anxiety and Stress Scale (DASS)**

DASS was developed by Lovibond and Lovibond (1995). The scale measures current negative emotional symptoms including 42 items rated on a 4-point Likert-type Scale (0 = did not apply to me at all to 3 = applied to me very much, or most of the time). DASS has three subscales which are depression, anxiety and stress. Each subscale consists of 14 items, and range of possible scores for each scale is 0–42. The scale also gives a chance to evaluate the degree of the depression, anxiety and stress from mild to extreme. Scores with 0-9 for depression, 0-7 for anxiety, and 0-14 for stress classified as “normal”. Studies about the psychometric properties of DASS indicated that DASS is found as a valid and reliable instrument in both clinical and non-clinical samples (e.g., Crawford & Henry, 2003; Lovibond & Lovibond, 1995). The reported internal consistency for the original version: Depression .91, anxiety .84, and stress .90 (Lovibond & Lovibond, 1995).

Turkish version of DASS was translated by Uncu, Bayram, and Bilgel (2007). Bilgel and Bayram (2010) examined the psychometric properties of DASS in

Turkish undergraduate student sample. Findings also showed that DASS is a valid and reliable instrument in university student (Bilgel & Bayram, 2010). Internal consistency for Turkish version: Depression .92, anxiety .86, and stress .88 (Bilgel & Bayram, 2010). Sample items from the Turkish version of DASS were presented in Appendix D.

### 3.3.2.1 Validity and Reliability of the DASS

In the present study, confirmatory factor analysis was utilized to test three factor model of the DASS by using the LISREL 8.80 program. The model was estimated with robust Maximum Likelihood estimation and tested with the Satorra Bentler chi square. Confirmatory factor analysis indicated an acceptable model fit (Table 3.8). Standardized factor loadings ranged between .32 and .77 (Table 3.7).

Table 3.7

#### *Unstandardized and Standardized Parameter Estimates for the DASS*

Construct	Item	Unstandardi zed Factor Loadings	Standardi zed Factor Loadings	<i>t</i>	<i>R</i> <sup>2</sup>
Depression	DASS 3	.47	.64	18.00	.41
	DASS 5	.49	.60	16.13	.36
	DASS 10	.63	.68	19.52	.46
	DASS 13	.63	.74	23.24	.55
	DASS 16	.69	.78	25.40	.61
	DASS 17	.64	.71	20.27	.50
	DASS 21	.73	.77	27.18	.59
	DASS 24	.65	.74	23.51	.55
	DASS 26	.68	.77	23.35	.59
	DASS 31	.66	.74	22.96	.55
	DASS 34	.70	.76	23.76	.57
	DASS 37	.77	.83	29.24	.68



Table 3.7 (continued)

	DASS 38	.77	.82	31.39	.68
	DASS 42	.50	.52	14.44	.27
Anxiety	DASS 2	.32	.40	9.62	.16
	DASS 4	.39	.49	12.37	.24
	DASS 7	.51	.59	15.95	.35
	DASS 9	.36	.42	10.86	.18
	DASS 15	.41	.59	14.02	.34
	DASS 19	.43	.49	12.62	.24
	DASS 20	.55	.68	19.26	.47
	DASS 23	.39	.56	13.03	.31
	DASS 25	.57	.60	16.04	.36
	DASS 28	.72	.77	26.67	.60
	DASS 30	.65	.69	22.06	.48
	DASS 36	.64	.76	23.55	.58
	DASS 40	.62	.68	20.09	.46
	DASS 41	.51	.60	14.65	.36
Stress	DASS 1	.50	.58	16.05	.33
	DASS 6	.57	.66	18.36	.44
	DASS 8	.46	.56	13.98	.31
	DASS 11	.65	.71	22.38	.51
	DASS 12	.67	.74	23.77	.55
	DASS 14	.52	.55	14.98	.30
	DASS 18	.51	.61	15.83	.37
	DASS 22	.59	.67	18.46	.45
	DASS 27	.70	.74	23.85	.55
	DASS 29	.68	.72	22.11	.52
	DASS 32	.52	.57	15.49	.33
	DASS 33	.73	.80	27.23	.65
	DASS 35	.55	.59	16.40	.34
	DASS 39	.42	.56	13.69	.31

*Note.* All *t* values were significant

Table 3.8

*Goodness of Fit Indicators of Models for the DASS*

	$\chi^2$	<i>df</i>	$\chi^2/df$	<i>CFI</i>	<i>NNFI</i>	<i>NFI</i>	<i>RMSEA</i>	<i>SRMR</i>
Model	2858.18**	816	3.5	.97	.97	.96	.06	.06

*Note.* \*\*\*  $p < .001$

In the present study, Cronbach's coefficient alpha ( $\alpha$ ) for depression, anxiety, and stress were found .94, .89 and .91, respectively, for the present study. For total DASS, cronbach's coefficient alpha ( $\alpha$ ) was found as .96. According to Hair et al. (2010), internal consistency coefficient should be at least .70, so the values of depression, anxiety, stress, and total DASS had high reliability.

### 3.3.3 The Difficulties in Emotion Regulation Scale (DERS)

DERS was developed by Gratz and Roemer (2004). The scale measures six dimensions of emotion regulation difficulties which are lack of emotional awareness, lack of emotional clarity, non-acceptance of negative emotions, lack of strategy building, lack of control on impulsive behaviors, and difficulties engaging in goal directed behavior. The scale includes 36-items rated on a 5-point Likert-type Scale (1 = almost never to 5 = almost always). f Cronbach's alpha coefficients for original version is ranging from .80 to .89 for each subscale, and was .93 for total scale (Gratz & Roemer, 2004).

The scale was adapted to Turkish by Rugancı and Gençöz (2010). Factor structure of the scale was examined among university students. Findings indicated that the Turkish version of DERS had a similar factor structure of the original measure, but factor loading of item 10 ("When I'm upset, I acknowledge my feelings") was not consistent with the original scale, so researchers decided to exclude item 10 from the Turkish version of DERS (Rugancı & Gençöz, 2010). Thus, item 10 was also excluded from the scale while conducting analyses in the present study. Internal reliability for Turkish

version was ranging from .75 to .90 for each subscales, and for the total scale was .94 (Rugancı & Gençöz, 2010). In the present study, ERD subscales were used as observer variables to define latent Emotion Regulation Difficulties as were used in other studies (e.g., Akhun, 2012; Dragan, 2015). Sample items from the Turkish version of DASS were presented in Appendix D.

### ***3.3.3.1 Validity and Reliability of the DERS***

Confirmatory factor analysis was utilized to test six-factor model of the ERD by using the LISREL 8.80. The model was estimated with robust Maximum Likelihood estimation and tested with the Satorra Bentler chi square. Confirmatory factor analysis indicated acceptable model fit (Table 3.10). Standardized factor loadings of the six factor model were significant, and within the range of .19 and .85 (Table 3.9). Except for ERD17 (low standardized loading < .32; Tabacnick, & Fidell, 2013), all standardized factor loadings were higher than .32. Although ERD17 had low standardized loading, it was found as statistically significant. Furthermore, ERD17 had high standardized loading both in the original version of ERD (Gratz & Roemer, 2004), and Turkish version of ERD (Rugancı & Gençöz, 2010). Therefore, considering the original version of ERD (Gratz & Roemer, 2004), and Turkish version of ERD (Rugancı & Gençöz, 2010), the researcher decided to keep this item in the scale.

Table 3.9

*Unstandardized and Standardized Parameter Estimates for the DERS*

Construct	Item	Unstandardiz ed Factor Loading	Standardiz ed Factor Loading	<i>t</i>	<i>R</i> <sup>2</sup>
Lack of emotional clarity	ERD1	.73	.70	17.61	.49
	ERD4	.66	.64	18.82	.41
	ERD5	.72	.69	18.75	.48
	ERD7	.77	.74	20.53	.55
	ERD9	.68	.63	15.91	.40
Lack of emotional awareness	ERD2	.68	.77	21.09	.59
	ERD6	.78	.82	24.41	.68
	ERD8	.72	.79	21.81	.63
	ERD17	.20	.19	4.10	.01
	ERD34	.34	.33	6.96	.11
Lack of control on impulsive behavior	ERD3	.61	.55	14.31	.31
	ERD14	.96	.81	26.34	.66
	ERD19	1.01	.83	30.03	.69
	ERD24	.44	.43	9.68	.18
	ERD27	.89	.79	24.95	.63
	ERD32	.95	.84	29.10	.70
Non-acceptance of negative emotions	ERD11	.66	.57	14.59	.32
	ERD12	.76	.70	19.19	.49
	ERD21	.79	.76	23.69	.58
	ERD23	.83	.67	19.20	.44
	ERD25	.89	.76	24.20	.57
	ERD29	.88	.72	21.71	.52
Lack of strategy building	ERD15	1.02	.80	28.61	.64
	ERD16	1.08	.83	20.61	.68
	ERD22	.46	.43	9.89	.18
	ERD28	.91	.77	23.89	.59
	ERD30	.89	.73	23.73	.54
	ERD31	.85	.74	22.47	.54

Table 3.9 (continued)

	ERD35	.77	.72	20.65	.52
	ERD36	.92	.76	25.37	.58
	ERD13	.86	.71	20.51	.51
Difficulties engaging	ERD18	.96	.85	28.75	.72
in goal	ERD20	.48	.43	9.47	.18
	ERD26	.97	.83	26.98	.68
	ERD33	.89	.76	22.38	.58

*Note.* All *t* -values were significant.

Table 3.10

*Goodness of Fit Indicators of Models for the DERS*

	$\chi^2$	<i>df</i>	$\chi^2/df$	<i>CFI</i>	<i>NNFI</i>	<i>NFI</i>	<i>RMSEA</i>	<i>SRMR</i>
Model	2330.62***	545	4.3	.96	.95	.94	.07	.076

*Note.* \*\*\*  $p < .001$

Reliability was conducted after confirmatory factor analysis. Internal consistency for the total scale was found as .93. Cronbach's alpha coefficients ranged between .70 and .90 for the subscales (lack of emotional clarity .81, lack of emotional awareness .70, lack of control on impulsive behaviors .86, non-acceptance of negative emotions .85, lack of strategy building .90, difficulties engaging in goal directed behavior .84).

### 3.3.4 Five Facets of Mindfulness Questionnaire (FFMQ)

FFMQ was developed by Baer et al. (2006). The questionnaire measures five mindfulness skills which are observing, describing, acting with awareness, non-judging of experience, and non-reactivity to inner experience. The questionnaire consists of 39 items rated on a 5-point Likert-type Scale (1 = never or very rarely true to 5 = very often or always true). Each of four subscales also consists of 8 items, and the non-reactivity to inner experience

subscale consists of 7 items. Both exploratory factor analyses and confirmatory factor analyses for FFMQ were conducted by Baer et al. (2006). While performing CFA, Baer et al. (2006) used item parcels (groups of items) rather than individual items. Findings indicated that FFMQ is both valid and reliable instrument (Baer et al., 2006). Cronbach's alpha coefficients for the subscales were as follows; .83 for observing, .91 for describing, .87 for acting with awareness, .87 for non-judging of inner experience, .75 for non-reactivity to inner experience (Baer et al., 2006).

Turkish version of FFMQ was adapted by Kınay (2013). Internal consistency for Turkish version was between .67-.85 (Kınay, 2013). In Turkish version, Kınay (2013) reported that results for item 4 ("I perceive my feelings and emotions without having to react to them") were not consistent with the original scale's factor structure. It was under the factor of observing instead of nonreactivity to inner experience as were in the original version of FFMQ. In the present study, Turkish translation of the questionnaire was reevaluated, and the researcher realized that item 4 was not appropriately translated. Then, item 4 was reevaluated by five bilingual people, and substantial changes on item 4 were made and used in the study. Moreover, the researcher obtained permission from Fatoş Kınay to make change on the questionnaire via e-mail.

#### ***3.3.4.1 Validity and Reliability Studies of the FFMQ***

Considering the Emotional Regulation Therapy Model and prior research about mindfulness, the researcher decided to measure mindfulness with five distinct constructs, so five factor models was used while performing CFA in the present study. Before performing CFA, item parcels (groups of items) were used, as were used in the original version of FFMQ (Baer et al., 2006). Thus, 3 parcels as indicators for each scale were created.

Later, Confirmatory factor analysis was utilized to test five factor model of the FFMQ by using the LISREL 8.80 program. The model was estimated using robust Maximum Likelihood estimation and tested using the Satorra Bentler chi square. Confirmatory factor analysis indicated an acceptable model fit (Table 3.12). Standardized factor loadings ranged between .46 and .73, and all of them were significant (Table3.11).

Table 3.11

*Unstandardized and Standardized Parameter Estimates for the FFMQ*

Construct	Item	Unstandardiz ed Factor Loading	Standardiz ed Factor Loading	<i>t</i>	<i>R</i> <sup>2</sup>
Observing	Parcel1	.65	.80	21.93	.63
	Parcel2	.61	.82	22.06	.68
	Parcel3	.62	.73	20.09	.53
Describing	Parcel1	.69	.87	27.00	.76
	Parcel2	.65	.85	24.50	.72
	Parcel3	.72	.84	25.10	.70
Acting with awareness	Parcel1	.73	.91	28.34	.82
	Parcel2	.64	.76	21.19	.58
	Parcel3	.70	.79	22.86	.63
Non-judging of Inner experience	Parcel1	.51	.74	28.09	.54
	Parcel2	.63	.82	21.63	.66
	Parcel3	.68	.76	20.58	.58
Non-reactivity to Inner experience	Parcel1	.46	.70	14.86	.49
	Parcel2	.54	.71	15.66	.50
	Parcel3	.60	.78	18.72	.61

*Note.* All *t* -values were significant.

Table 3.12

*Goodness of Fit Indicators of Models for the FFMQ*

	$\chi^2$	<i>df</i>	$\chi^2/df$	<i>CFI</i>	<i>NNFI</i>	<i>NFI</i>	<i>RMSEA</i>	<i>SRMR</i>
Model	169.50***	80	2.12	.98	.98	.97	.04	.04

*Note.* \*\*\*  $p < .001$

Reliability was conducted after confirmatory factor analysis. Internal consistency was found as .82 for observing, .89 for describing, .86 for acting with awareness, .81 for non-judging of experience, .77 for non-reactivity to inner experience, and was .74 for the total scale.

### 3.3.5 Emotion Regulation Questionnaire (ERQ)

ERQ was developed by Gross and John (2003). The scale measures individuals' emotional regulatory strategies including 10 items rated on a 7-point Likert-type Scale (1 = strongly disagree to 7 = strongly agree). ERQ has two dimensions which are reappraisal (6 items) and suppression (4 items). The reappraisal scale measures individuals' tendency to regulate emotion by changing thoughts. The Suppression scale measures lack of emotional expression. Internal consistency for the original version was .79 for reappraisal, and .73 for suppression (Gross & John, 2003).

Turkish version of ERQ was adapted by Yurtsever (2004). Internal reliability for the Turkish version was .85 for reappraisal, and .78 for suppression (Yurtsever, 2008). Considering the Emotional Regulation Therapy Model, reappraisal dimension was used to assess reframing for the present study.

#### 3.3.5.1 Validity and Reliability Studies of the ERQ-Reappraisal

In the present study, only reappraisal subscale of ERQ was used. Hence, CFA was conducted for reappraisal scale. Confirmatory factor analysis was utilized to test unifactorial model of the ERQ- Reappraisal by using the LISREL 8.80



program. The model was estimated with robust Maximum Likelihood estimation and tested with the Satorra Bentler chi square. Confirmatory factor analysis indicated a mediocre fit because of the value of RMSEA (Table 3.14). Thus, modification indices of errors were checked. The pair with high error covariance was ERQ1 and ERQ3, so for those items, modification was conducted and the analysis was rerun. According to results, confirmatory factor analysis indicated an acceptable model fit. Results were presented in Table 3.10. Standardized factor loadings ranged between .50 and .84 (Table 3.13). While testing measurement model and structural model for the study, model 2 was used.

Table 3.13

*Unstandardized and Standardized Parameter Estimates for the ERQ-Reappraisal*

Construct	Item	Unstandardiz ed Factor Loading	Standardiz ed Factor Loading	<i>t</i>	<i>R</i> <sup>2</sup>
Reframing /Reappraisal	ERQ1	.95	.63	16.13	.45
	ERQ3	1.04	.69	17.09	.53
	ERQ5	.76	.50	11.52	.25
	ERQ7	1.24	.84	25.71	.70
	ERQ8	1.11	.76	19.40	.56
	ERQ10	1.22	.81	22.44	.65

*Note.* All *t* - values were significant.

Table 3.14

*Goodness of Fit Indicators of Models for the ERQ-Reappraisal*

	$\chi^2$	<i>df</i>	$\chi^2/df$	<i>CFI</i>	<i>NNFI</i>	<i>NFI</i>	<i>RMSEA</i>	<i>SRMR</i>
Model 1	54.16***	9	6	.98	.97	.98	.09	.04
Model 2	20.76***	8	2.6	.99	.99	.99	.05	.02

*Note.* \*\*\* *p* < .001

Cronbach coefficient alpha was found .86 for reappraisal scale. Thus, the scale was found to be both valid and reliable for the present study.

### **3.3.6 Demographic Information Form**

Demographic information form was developed by the researcher in order to get information about the characteristics of participants. The form included questions about gender, age, faculty, department, grade, and practicing meditation (Appendix H).

### **3.4 Procedure**

Necessary permissions were obtained from Middle East Technical University Human Subjects Ethics Committee for the pilot study (Appendix A), and for the main study (Appendix B). For the pilot study, procedure was explained under the translation procedure of the experiences questionnaire section.

For the main study, the data were collected during spring semester of 2014-2015 academic years. Before collecting the data, all instruments which were used in the study were checked in terms of translation and misspelling. Then, a booklet including all instruments was prepared. While collecting the data, paper-pencil format was used. Survey booklet was administered to the participants during the class hours by the researcher with the permission of the course instructor. The purpose of the study was explained to the participants. Then, only volunteered students participated in the study. The application process took approximately 30 minutes. After collecting the data, necessary statistical analyses were conducted.

### 3.5 Data Analysis

The main aim of the study was to examine the relationships between five facets of mindfulness, reframing, decentering, and psychological distress mediated by emotion regulation difficulties. In order to achieve this main aim, Structural Equation Modeling (SEM) was performed using LISREL 8.80. SEM was preferred because it gives a chance to test hypothesized relationships among observed and latent variables (Kline, 2011), and it gives a chance to test mediational model with multiple independent variables (Gunzler et al., 2013).

Before performing SEM, several steps were followed. Firstly, assumptions of SEM were evaluated by using LISREL 8.80 and SPSS version 22. Secondly, descriptive analyses were tested by means, standard deviations, and bivariate correlations. Then, preliminary analyses was conducted to examine the role of demographic questions regarding age, gender, meditation practices on variables by using independent sample t test and Pearson product moment correlation. Finally, two step procedures were followed while performing SEM. The first one was measurement model and the second one was testing structural model using LISREL.

While evaluating results of the measurement model and SEM, the root mean square error of approximation (RMSEA), the standardized root mean square residual (SRMR) and a chi-square test for discrepancy between the model and the data were used to evaluate model fit. The comparative fit index (CFI), the nonnormed fit index (NNFI), and the normed fit index (NFI) were used for the model comparison. Due to  $\chi^2$  value is sensitive to sample size,  $\chi^2/df$  value is recommended while evaluating model fit (Kline, 2011).  $\chi^2/df$  values lower than 5 is indicative of adequate model fit (Wheaton et al., 1977), and lower than 3 also indicates good model fit (Kline, 2011). The RMSEA value of .05 is considered to indicate close fit, .08 a fair fit, and .10 a marginal fit (Browne & Cudeck, 1993). The SRMR has a range of possible values of 0.0 to 1.0, with

values closer to 0.0 indicating perfect fit (Brown, 2006). SRMR values lower than .08 is considered to indicate reasonably good model fit (Hu & Bentler, 1999), and lower than .10 is considered favorable model fit (Kline, 2011). NNFI and CFI values in the range of .90-95 are also interpreted as acceptable model fit (Bentler, 1990), and NNFI and CFI values close to .95 are considered to indicate good model fit (Hu & Bentler, 1999).

### **3.5.1 Description of the Variables in the Study**

Before describing the variables in the present study, a few terms used in the terminology of SEM were explained. In SEM, there are two basic variables. The first one is latent variable which is not directly observable, and the second one is observed variable or indicator which is directly observable, and which is used to define latent variables (Schumacker & Lomax, 2004). For example, in the present study, decentering was a latent variable, and 11 items of experiences questionnaire were observed variables or indicators of decentering. Moreover, latent variables are categorized as exogenous and endogenous variables. Latent variables which are not predicted or influenced by other latent variables are named as exogenous variables, and latent variables which are predicted or influenced by one or more latent variables are named as endogenous variables (Schumacker & Lomax, 2004). Moreover, exogenous variables may affect endogenous variables indirectly through the mediator variables (Tabachnick & Fidel, 2013).

In this study, the exogenous variables were five facets of mindfulness, decentering, and reframing. The mediator variable was emotion regulation difficulties and the endogenous variable was psychological distress. All variables were continuous. Each variable was described below.

### *Exogenous Variables*

*Five facets of mindfulness:* Subscales of five facets of mindfulness questionnaire (Baer et al., 2006) were used to measure dimensions of mindfulness (observing, describing, acting with awareness, non-judging of experience, and non-reactivity to inner experience). Each subscale was continuous, and had a minimum of 5 and maximum of 15. Higher score on each subscale indicated higher level of mindfulness

*Observing:* It was measured by 8 items from observing subscale of five facets of mindfulness questionnaire (Baer et al., 2006). While analyzing data, 3 parcels were created for the scale with the average of two or three items (items were assigned sequentially to parcels such as first item to Parcel 1, next item to parcel 2). Three parcels were used as indicators of observing.

*Describing:* It was measured by 8 items from describing subscale of five facets of mindfulness questionnaire (Baer et al., 2006). While analyzing data, 3 parcels were created for the scale with the average of two or three items (items were assigned sequentially to parcels such as first item to Parcel 1, next item to parcel 2). Three parcels were used as indicators of describing.

*Acting with awareness:* It was measured by 8 items from acting with awareness subscale of five facets of mindfulness questionnaire (Baer et al., 2006). While analyzing data, 3 parcels were created for the scale with the average of two or three items (items were assigned sequentially to parcels such as first item to Parcel 1, next item to parcel 2). Three parcels were used as indicators of acting with awareness.

*Non-Judging of inner experience:* It was measured by 8 items from non-judging of experience subscale of five facets of mindfulness questionnaire (Baer et al., 2006). While analyzing data, 3 parcels were created for the scale

with the average of two or three items (items were assigned sequentially to parcels such as first item to Parcel 1, next item to parcel 2). Three parcels were used as indicators of non-judging of experience.

*Non-Reactivity to inner experience:* Non-reactivity to inner experience was measured by 7 items from non-reactivity to inner experience subscale of five facets of mindfulness questionnaire (Baer et al., 2006). While analyzing data, 3 parcels were created for the scale with the average of two or three items (items were assigned sequentially to parcels such as first item to Parcel 1, next item to parcel 2). Three parcels were used as indicators of non-judging of experience.

*Decentering:* Experiences Questionnaire including 11 items were used to measure decentering. 11 items were used as indicators of decentering. Decentering was a continuous variable (min: 3 and max: 55). Higher score on this scale indicated higher level of decentering.

*Reframing:* The reappraisal subscale of Emotion Regulation Questionnaire was used to measure reframing. 6 items were used as indicators of reframing. Reframing was a continuous variable, and the total score ranged from 1 to 42 with higher score indicating a higher level of reframing.

#### *Mediator Variable*

*Emotion Regulation Difficulties:* The Difficulties in Emotion Regulation Scale including 36 items and six subscales which are lack of emotional clarity, lack of emotional awareness, lack of control on impulsive behaviors, non-acceptance of negative emotions, lack of strategy building, and difficulties engaging in goal directed behavior was used to measure emotion regulation difficulties. Total scores of each subscale were used as indicators of emotion regulation difficulties. Difficulty in emotion regulation was a continuous

variable, and had a minimum of 1 and maximum of 180. The maximum value of the scale was 175 for the present study because DERS10 was excluded from the scale based on the Turkish version of DERS (Rugancı & Gençöz, 2010). Higher score in this scale indicated higher level of emotion regulation difficulties.

### *Endogenous Variable*

*Psychological distress:* Depression anxiety and stress scale (DASS) including three subscales which were depression, anxiety, and stress was used to measure psychological distress. Total scores of each subscale were used as indicators of psychological distress. Psychological distress was a continuous variable (42 items, min: 0, and max: 126). Higher score on this scale represented higher level of symptoms of depression, anxiety, and stress.

### **3.6 Limitations of the Study**

This study has several limitations. While evaluating the results of the study, limitations of the study should be considered. Firstly, correlational research design was used. Due to the nature of the correlational research design, causality cannot be inferred.

Secondly, convenience sampling method was used for the current study. According to Heppner et al. (2008), convenience sampling method limits the generalizability or external validity of the results. Data also were collected from only one state university in Turkey, so generalizing the results of the study is limited. Furthermore, more than half of the participants were women (69.2%), and majority were from the faculty of education (59.2%). Therefore, it should be noted that those factors might decrease the representativeness of university students.

Thirdly, self-report measurement was used in the study, and the researcher assumed that participants responded honestly to the questionnaires. Self-report measurement has some advantages such as giving a chance to measure private things or being inexpensive, but it is vulnerable to biases by participants (Heppner et al., 2008).



## **CHAPTER 4**

### **RESULTS**

In this chapter, the results of the Structural Equation Modelling (SEM) used to examine the relationship between five facets of mindfulness, reframing, decentering and psychological distress mediated by emotion regulation difficulties were reported. This chapter included five main sections which were assumptions of SEM, descriptive statistics, preliminary analyses, structural equation modelling results and summary of the results.

#### **4.1 Assumptions of SEM**

The original data file was evaluated through SPSS version 22 and LISREL version 8.8 for accuracy of the data entry, missing values, outliers, the adequacy of sample size, univariate and multivariate normality, linearity and multicollinearity.

##### **4.1.1 Missing Data**

Before analyzing data, accuracy of data entry was assessed by minimum and maximum values of the items and the data file was checked randomly. Then missing values were examined. In the present study, all of the items had missing data less than 1%. However, SEM requires complete data for all cases, and there are some options to deal with missing data. These are deleting subjects with missing values, replacing the missing values, and using robust statistical procedures (Schumacker & Lomax, 2004). Before deciding the best option for the present study, the pattern of missing data was examined.

Tabachnick and Fidell (2013) described missing data as MCAR (missing completely at random), MAR (missing at random) and MNAR (missing not at random or non-ignorable). Little's MCAR test gives a chance to understand whether missing data is random or not, so Little's MCAR was conducted separately for each questionnaire to provide more accurate imputations. Results revealed that all variables had statistically non-significant results except for the stress and depression subscales of DASS. Thus, MCAR (missing completely at random) may be inferred for all variables except for stress and depression subscales of DASS. In order to gain more accurate information about the pattern of missing data, Tabachnick and Fidell (2013) recommend comparing two groups with missing and without missing values on variables under investigation. Thus, ANOVAs were conducted to investigate the randomness of missing data. According to the results, MAR could be inferred because cases with complete scores and cases with missing data were not significantly different with respect to variables under investigation. The analyses indicated that those variables were missing randomly (MCAR-MAR). In conclusion, expectation maximization (EM) method was performed because it gives expected value based on maximum likelihood parameter estimation (Schumacker & Lomax, 2004), and it proposes the simplest and most reasonable approach to imputation of missing data (Tabachnick & Fidell, 2013).

#### **4.1.2 Influential Outliers**

After handling missing values, univariate and multivariate outliers were checked. The standardized  $z$  scores ( $\pm 3.29$ ; Tabachnick & Fidell, 2013) were used to detect univariate outliers. In the present study, there were a few cases more than  $\pm 3.29$   $z$  score, and maximum standardized  $z$  score was 3.66. Tabachnick and Fidell, (2013) also stated that a few  $z$  scores more than  $\pm 3.29$

are possible in large sample sizes, thus researcher decided to include univariate outliers in the data set.

Mahalanobis distance statistic was used to detect multivariate outliers. Using Mahalanobis distance, 16 problematic values greater than the critical Mahalanobis distance values were identified. After that, the analyses were performed for two different data sets: One with outliers and one without outliers. The results indicated that exclusion of the outliers did not significantly change the outcome of the study. Moreover, deletion of cases with outlier caused new outliers, so it is legitimate to keep the outliers in the data set. Therefore, researcher decided to keep the outliers in the data set.

#### **4.1.3 Sample Size Adequacy**

Tabachnick and Fidel (2013) stated that the adequacy of sample size for factor analysis which is at least 300 cases can be generalized to Structural Equation Modeling (SEM). Kline (2011) also indicated that a representative sample size in studies where SEM is performed is about 200 cases.

Hoelter's critical  $N$  is another recommended reference to examine the adequacy of sample size while performing SEM (Teo, Ting Tsai, & Yang, 2013). Hoelter's critical  $N$  was calculated by using LISREL software, and the Critical  $N$  statistic was found as 196.94. In other words, the minimum satisfactory sample size for the proposed model was 196.94. In the present study, the sample size was 620, so it is possible to say that the sample size was sufficient on the basis of Critical  $N$  statistic and recommendation from research.

#### **4.1.4 Independent Observation**

Independent observations assumption can be assumed for the present study as the researcher observed the participants' responding to the questions independently of one another in the data collection process.

#### **4.1.5 Normality**

The assumption of univariate normality was checked through evaluation of skewness and kurtosis values, histograms, and Q-Q plots of the variables. The value of skewness ranged between  $-.86$  and  $.90$ ; the value of kurtosis ranged between  $-.60$  and  $.46$  (Table 4.1). These values were between  $-3$  and  $3$  (Tabachnick & Fidell, 2013). While, the values of kurtosis and skewness, which remained between  $-3$  and  $3$ , provided support for univariate normality, histograms and Q-Q plots indicated that univariate normality was not perfectly provided. Accordingly, depression, anxiety and subscales of emotion regulation difficulties had negatively skewed histograms. Test of multivariate normality also showed significant deviations from multivariate normality (Skewness  $z = 43.02$ ,  $p < .001$ ; Kurtosis  $z = 27.56$ ,  $p < .001$ ; Skewness and Kurtosis Chi-Square =  $2610.065$ ,  $p < .001$ ), so normality assumption was violated.

The majority of data collected in behavioral research do not provide normality assumption (Micceri, 1989). Indeed, in some areas of research such as drug use and psychopathology, it is not legitimate to expect normal distribution in the population (Curran, West, & Finch, 1996; Tabachnick & Fidell, 2013). In the present study, normality was also not expected due to the inclusion of variables that have non-normal distribution by nature, such as psychological distress and emotion regulation difficulties. If a variable is not expected to be normally distributed in the population, Tabachnick and Fidell (2013) suggest selecting an estimation method that addresses the non-normality. Robust maximum

likelihood (ML) (Bentler, 1995; Satorra & Bentler, 1994), and weighted least squares (WLS) (Browne, 1984) are most commonly recommended estimation methods when non-normality is the case. According to Brown (2006), WLS is more appropriate for an extremely large sample, so robust ML with the Satorra Bentler chi square was used for the present study.

Table 4.1

*Skewness and Kurtosis Values for Items, Parcels, and Subscales*

	<i>Skewness</i>	<i>Kurtosis</i>
DEP	0.84	0.24
ANX	0.90	0.46
STRESS	0.35	-0.38
E1	0.37	0.10
E2	0.35	0.29
E3	0.35	-0.42
E4	0.43	-0.34
E5	0.26	-0.60
E6	-0.16	-0.43
o1	-0.22	-0.27
o2	-0.35	-0.15
o3	-0.28	-0.29
d1	0.05	-0.32
d2	-0.20	-0.02
d3	-0.02	-0.16
a1	-0.15	-0.31
a2	-0.18	-0.17
a3	-0.22	-0.39
n1	0.19	0.00
n2	0.10	0.01
n3	0.18	-0.15
nr1	0.03	0.40
nr2	0.05	0.03
nr3	0.06	0.04
Dec1	-0.71	0.29
Dec2	-0.08	-0.58
Dec3	0.05	-0.51
Dec4	0.20	-0.49

Table 4.1 (continued)

Dec5	0.29	-0.57
Dec6	-0.11	-0.68
Dec7	-0.23	-0.44
Dec8	-0.12	-0.46
Dec9	-0.19	-0.53
Dec10	-0.58	-0.20
Dec11	-0.47	-0.04
Ref1	-0.86	0.12
Ref2	-0.56	-0.36
Ref3	-0.58	-0.47
Ref4	-0.64	-0.21
Ref5	-0.52	-0.31
Ref6	-0.56	-0.29

*Note.* DEP = Depression; ANX = Anxiety; E1 = Lack of emotional clarity, E2 = Lack of emotional awareness; E3 = Lack of control on impulsive behaviors; E4 = Non-acceptance of negative emotions; E5 = Lack of strategy building, E6 = Difficulties engaging in goal directed behavior; o = Parcels for observing, d = Parcels for describing, a = parcels for act with awareness, n = Parcels for non-judging of inner experience, nr = Parcels for non-reactivity to inner experience; Dec = Decentering; Ref = Reframing.

#### 4.1.6 Normality, Linearity and Homoscedasticity of Residuals

The assumption of normality, linearity and homoscedasticity of residuals were checked by evaluating histograms, normal p-p plots, scatter plots, and partial regression residual plots. Histogram showed that the distribution of residuals was nearly normal, and normal p-p plot indicated that almost all points lie on the line. In the scatter plots of residuals, there was not apparent pattern. Moreover, the overall shapes of the partial plots of residuals were approximately oval, so it was assumed that the variables were linearly related and their variances were homogenously distributed.

#### **4.1.7 Multicollinearity**

Multicollinearity occurs if there is a strong correlation between two or more independent variables (Field, 2009). Correlation between the independent variables, VIF and tolerance values were controlled to identify multicollinearity. The highest correlation value between the independent variables was .58, so there was not any value of correlation between the independent variables higher than .90. According to Field (2009), if there is not any value of correlation between the independent variables higher than .90, this was an evident for no perfect multicollinearity.

Regarding VIF and tolerance values, VIF should be less than 10 (Myers, 1990), and tolerance should be more than .20 (Menard, 1995). The range of VIF values were from 1.30 to 2.41, so VIF values were less than 10. Moreover; the range of the tolerance values were from .41 to .77, so all values were higher than .20. Examination of both VIF and Tolerance values indicated no violation of the multicollinearity assumption.

#### **4.2 Descriptive Analysis Results**

Descriptive analyses were tested by means, standard deviations, and bivariate correlations. Firstly, means and standard deviations were presented, and then bivariate correlations among variables were examined.

##### **4.2.1 Mean and Standard Deviations**

According to descriptive statistic for endogenous variables, psychological distress had a mean value of 41.31 ( $SD = 22.79$ ). For psychological distress, the minimum score was 0, and maximum score was 125 in the present study. Considering minimum and maximum value, the mean score of psychological distress was not high. Moreover, the mean scores of symptoms of depression,

anxiety, and stress were 12.88 ( $SD = 9.27$ ), 11.14 ( $SD = 7.50$ ), and 17.29 ( $SD = 8.44$ ), respectively. Regarding the mean scores of symptoms of depression, anxiety, and stress, participants were found to have mild level of symptoms of depression, anxiety, and stress as the scoring of the DASS manual suggested. Emotion regulation difficulties had a mean value of 91.82 ( $SD = 21.69$ ). The total score for emotion regulation difficulties ranged from 37 to 160. The mean score of emotion regulation difficulties was high when compared within the range of 37-160.

For exogenous variables, mean and standard deviation for five facets of mindfulness: Observing ( $M = 27.62$ ,  $SD = 5.51$ ), describing ( $M = 27.33$ ,  $SD = 5.76$ ), acting with awareness ( $M = 26.19$ ,  $SD = 5.92$ ), nonjudging of inner experience ( $M = 21.32$ ,  $SD = 5.28$ ), and nonreactivity to inner experience ( $M = 20.31$ ,  $SD = 4.20$ ). Observing had the highest mean score, and non-reactivity to inner experience had the least mean score among dimensions of mindfulness. Although item parcels was used for five facets of mindfulness while performing SEM, means and standard deviations are reported in their original. Decentering had a mean value of 35.42 ( $SD = 7.22$ ) with a minimum value of 11 and maximum of 55. Finally, reframing had a minimum value of 6 and maximum of 42, and a mean value of 28.54 ( $SD = 6.88$ ).

#### **4.2.2 Bivariate Correlations**

Relationships between variables were evaluated by bivariate correlations. To gain more detailed information about relationships between exogenous latent variables (five facets of mindfulness, decentering, and reframing), mediator variable (emotion regulation difficulties), and endogenous variable (psychological distress) were examined, and presented in Table 4.2.

According to the results, except for observing all exogenous variables (describing, acting with awareness, non-judging of inner experience, non-



reactivity to inner experience, decentering and reframing) were significantly and negatively correlated with psychological distress. Observing was significantly and positively associated with psychological distress. Except for observing all exogenous variables (describing, acting with awareness, non-judging of inner experience, non-reactivity to inner experience, decentering and reframing) were also significantly and negatively correlated with mediator variable (emotion regulation difficulties). Observing was not significantly related to emotion regulation difficulties. Two of the exogenous variables, acting with awareness and decentering, had the largest correlations between psychological distress and emotion regulation difficulties. Thus, it was possible to say that participants who have high score on describing, acting with awareness, non-judging of inner experience, non-reactivity to inner experience, decentering, and reframing skills have less emotion regulation difficulties and psychological distress.

In terms of correlations among exogenous variables, decentering was significantly positively correlated with all exogenous variables except for non-judging of inner experience scale. Reframing was also significantly positively correlated with all exogenous variables except for non-judging of inner experience. Surprisingly, non-judging of inner experience had a significant negative correlation with reframing, and it did not have a significant correlation with decentering. Among the mindfulness scales, the correlational analyses showed significant positive correlations, but unexpected relationships were also found among mindfulness scales such as the non-significant correlation between acting with awareness and observation and the non-significant correlation between acting with awareness and non-reactivity to inner experience. The strongest positive correlation was between acting with awareness and describing.

Table 4.2

*Correlations among Variables*

<i>Variables</i>	1	2	3	4	5	6	7	8	9
1.PD	–								
2.ERD	.63**	–							
3.Obs	.13**	-.05	–						
4.Des	-.24**	-.43**	-.34**	–					
5.Act	-.50**	-.55**	-.08	.38**	–				
6.NJ	-.25**	-.25**	-.31**	-.09*	.28**	–			
7.NR	-.24**	-.39**	.27**	.32**	.04	-.18**	–		
8.Dec	-.45**	-.60**	.16**	.29**	.25**	.05	.58**	–	
9.Ref	-.30**	-.38**	.20**	.26**	.20**	-.11**	.40**	.48**	–
<i>M</i>	41.31	91.82	27.62	27.33	26.19	21.32	20.31	35.42	28.54
<i>SD</i>	22.79	21.69	5.51	5.76	5.92	5.28	4.20	7.22	6.88

*Note.* PD = Psychological Distress, ERD = Emotion regulation difficulties, Obs = Observing, Des = Describing, Act = Acting with awareness, NJ = Non-Judging of inner experience, NR = Non-reactivity to inner experience. Dec = Decentering, and Ref = Reframing.

\*  $p < .05$ , \*\*  $p < .01$ , two tailed.

### 4.3 Structural Equation Modeling

Considering the Emotional Regulation Therapy Model, structural equation modeling was used in order to examine the mediational model in which relations among five facets of mindfulness, reframing, decentering and psychological distress mediated by emotion regulation difficulties. Structural equation modelling is an appropriate statistical approach to test mediational model with multiple independent variables (Gunzler et al., 2013).

Andersen and Gerbing (1988) suggested two steps procedure while performing SEM. The first one is measurement model, and the second one is testing structural model. In the present study, the two steps procedure was also used. Further, both measurement and structural model were evaluated considering

several fit indices and their acceptable cutoff values which are  $\chi^2 / df$  values lower than 5 (Wheaton et al., 1977), NFI, NNFI and CFI values close to .95, and SRMR values less than or equal to .08 (Hu & Bentler, 1999), RMSEA values lower than .08 (Browne & Cudeck, 1993).

#### **4.3.1 Results for the Measurement Model**

A measurement model is a part of a SEM model to state the relations between observed variables and latent variables (Khine, 2013). Moreover, an acceptable measurement model is evaluated as a requirement before testing hypotheses about the structural model (Kline, 2011). Therefore, the measurement model was tested by using Confirmatory Factor Analysis in the present study. The model included 9 hypothesized factors. These were five facets of mindfulness (observe, describing, acting with awareness, nonjudging, and nonreactivity with 3 parcels as indicators for each scale), decentering (11 items as indicators), reframing (6 items as indicators), ERD (subscales of emotion regulation difficulties as indicators), and psychological distress (depression, anxiety and stress as indicators).

The measurement model was estimated with robust Maximum Likelihood estimation and tested with the Satorra Bentler chi square. According to the results, confirmatory factor analysis indicated an acceptable model fit; Satorra-Bentler  $\chi^2 (2636.42)/df (742) = 3.5$  ( $p < .001$ ),  $RMSEA = 0.06$  (90% CI: 0.05-0.06),  $CFI = .95$ ,  $SRMR = 0.08$ ,  $NNFI = .94$  and  $NFI = .93$ . Moreover, all of the standardized factor loadings were significant ( $p < .01$ ), and they ranged between .17 and .90. According to Kline (2011), standardized factor loadings that are less than .10 have small, loadings that are around .30 have medium, loadings that are greater than .50 have large effect. Hence, it could be concluded that except for the lack of emotional awareness subscale (E2), all indicators have large effects. Although the standardized factor loading of E2 was small, it was found as significant. Moreover, in the original version of

ERD (Gratz & Roemer, 2004), and the Turkish version of ERD (Rugancı & Gençöz, 2010), the authors found satisfactory results for this subscale. Therefore, the researcher decided to keep the lack of emotional awareness subscale (E2) in the model as an indicator of emotion regulation difficulties. Measurement Model was presented in Figure 4.1, and standardized factor loadings presented in Table 4.3.



Table 4.3

*Unstandardized and Standardized Parameter Estimates for the Measurement Model*

Latent Variables and Indicators	Unstandardi zed factor Loading	Standardi zed Factor Loading	<i>t</i>	<i>R</i> <sup>2</sup>
<u>Psychological Distress (PD)</u>				
Depression	7.79	.84	25.18	.71
Anxiety	6.51	.87	26.61	.75
Stress	7.15	.85	24.86	.72
<u>Emotion Regulation Difficulties (ERD)</u>				
E1	2.29	.58	14.10	.34
E2	.56	.17	3.87	.03
E3	4.24	.82	24.34	.67
E4	3.66	.70	18.10	.49
E5	6.53	.90	28.33	.81
E6	2.95	.65	17.38	.42
<u>Observing (OBS)</u>				
o1	.65	.80	21.61	.64
o2	.61	.82	22.16	.68
o3	.62	.73	19.88	.53
<u>Describing (DES)</u>				
d1	.69	.87	26.11	.76
d2	.65	.85	24.87	.72
d3	.72	.83	25.09	.70
<u>Acting with awareness (ACT)</u>				
a1	.72	.90	27.30	.80
a2	.65	.78	22.14	.61
a3	.69	.79	21.87	.62
<u>Nonjudging of inner experience (NJ)</u>				
n1	.51	.73	18.16	.54
n2	.63	.81	21.87	.66
n3	.68	.77	21.74	.59
<u>Nonreactivity to inner experience (NR)</u>				
nr1	.43	.66	15.67	.44
nr2	.60	.78	20.07	.60
nr3	.57	.74	18.50	.55
<u>Decentering (Dec)</u>				
Dec1	.50	.56	15.06	.31

Table 4.3 (continued)

Dec2	.67	.67	18.18	.45
Dec3	.63	.62	16.26	.38
Dec4	.62	.60	15.47	.36
Dec5	.62	.57	14.77	.33
Dec6	.67	.64	16.87	.41
Dec7	.70	.68	18.62	.46
Dec8	.70	.71	19.98	.50
Dec9	.57	.58	14.00	.34
Dec10	.65	.56	13.40	.31
Dec11	.51	.55	12.94	.30
<u>Reframing (Ref)</u>				
Ref1	.95	.63	16.36	.40
Ref2	1.03	.68	16.98	.47
Ref3	.81	.53	12.50	.28
Ref4	1.22	.83	25.04	.69
Ref5	1.14	.78	21.07	.61
Ref6	1.21	.80	22.74	.65

*Note.* E1 = Lack of emotional clarity, E2 = lack of emotional awareness, E3 = lack of control on impulsive behaviors E4 = Non-acceptance of negative emotions, E5 = Lack of strategy building, E6 = Difficulties engaging in goal directed behavior.

All *t*-values were significant,  $p < .01$ .

Correlations among latent variables were evaluated in the measurement model. According to the results, the majority of structural correlations was significant among variables, and ranged between 0.0 and .73. Correlations among latent variables results among variables were presented in Table 4.4.

Table 4.4

*Correlations among Variables in the Measurement Model*

<i>Variables</i>	1	2	3	4	5	6	7	8	9
1.PD	–								
2.ERD	.71**	–							
3.Obs	.15**	0.0	–						
4.Des	-.26**	-.40**	.39**	–					
5.Act	-.56**	-.56**	-.11*	.42**	–				
6.NJ	-.29**	-.31**	-.37**	-.10	.34*	–			
7.NR	-.32**	-.49**	.34**	.40**	.08	-.21**	–		
8.Dec	-.51**	-.68**	.17**	.32**	.29*	.06	.73**	–	
9.Ref	-.31**	-.40**	.23**	.29**	.20*	-.14**	.50**	.51**	–

*Note.* PD = Psychological Distress, ERD = Emotion regulation difficulties, Dec = Decentering, Ref = Reframing, Obs = Observing, Des = Describing, Act = Acting with awareness, NJ = Non-Judging of inner experience, NR = Non-reactivity to inner experience.

\* $p < .05$ , \*\* $p < .01$ , two tailed.

### 4.3.2 Results for the Structural Model

The main aim of the study was to examine the relationship between five facets of mindfulness, reframing, decentering and psychological distress with the indirect effect of emotion regulation difficulties. Thus, both direct relationships between psychological distress and exogenous variables (five facets of mindfulness, reframing and decentering), and indirect relationships between psychological distress and exogenous variables (five facets of mindfulness, reframing and decentering) through emotion regulation difficulties were examined. The hypothesized model tested by testing structural model.

Based on the results of the measurement model, structural model was tested by using LISREL version 8.80. Structural model was estimated with robust Maximum Likelihood estimation and tested with the Satorra Bentler chi square. The results indicated an acceptable model fit; Satorra-Bentler  $\chi^2/df = 3.5$  ( $p < .001$ ) (2636.42/742),  $RMSEA = 0.06$  (90 percent confidence interval for  $RMSEA$  0.06-0.07),  $CFI = .95$ ,  $SRMR = 0.08$ ,  $NNFI = .94$  and  $NFI = .93$ .



#### *4.3.2.1 Direct and Indirect Relationships*

As recommended Preacher and Hayes (2008), both direct and indirect relationships were examined when the mediator (emotion regulation difficulties) was included in the model. Results indicated that psychological distress was significantly and directly predicted by observing ( $\beta = .16, p < .01$ ) and acting with awareness ( $\beta = -.23, p < .01$ ). However, psychological distress was not significantly and directly predicted by decentering ( $\beta = -.11, p > .05$ ) describing ( $\beta = .02, p > .05$ ), nonjudging of inner experience ( $\beta = .00, p > .05$ ), nonreactivity to inner experience ( $\beta = -.00, p > .05$ ), and reframing ( $\beta = -.04, p > .05$ ). Further, psychological distress was significantly predicted by emotion regulation difficulties ( $\beta = .49, p < .01$ ).

Direct relationships between exogenous variables and mediator were also examined. Results showed that emotion regulation difficulties was significantly and directly predicted by decentering ( $\beta = -.41, p < .01$ ) and four facets of mindfulness which are describing ( $\beta = -.11, p < .05$ ), acting with awareness ( $\beta = -.29, p < .01$ ), nonjudging of inner experience ( $\beta = -.22, p < .01$ ), and non-reactivity to inner experience ( $\beta = -.16, p < .05$ ). Unexpectedly, reframing ( $\beta = -.07, p > .05$ ) and observing ( $\beta = .07, p > .05$ ) did not significantly predict emotion regulation difficulties. Therefore, scores of emotion regulation difficulties decrease when scores of decentering and four facets of mindfulness (describing, acting with awareness, non-judging of inner experience and non-reactivity to inner experience) increase.

The indirect relationships between exogenous variables and endogenous variable through the mediator were tested. Specifically, psychological distress was significantly and indirectly predicted by acting with awareness ( $\beta = -.14, p < .01$ ) via emotion regulation difficulties. Furthermore, psychological distress significantly and indirectly predicted by decentering ( $\beta = -.20, p < .01$ ), describing ( $\beta = -.05, p < .05$ ), non-judging of inner experience ( $\beta = -.11, p < .01$ ), and non-reactivity to inner experience ( $\beta = -.08, p < .05$ ) via emotion

regulation difficulties. Although describing and non-reactivity to inner experience significantly related to psychological distress through emotion regulation difficulties, their indirect effect on psychological distress were very small. Unexpectedly, observing ( $\beta = .03, p > .05$ ) and reframing ( $\beta = -.03, p > .05$ ) did not indirectly predict psychological distress. Therefore, increased decentering and four facets of mindfulness predicted less psychological distress which was associated with less emotion regulation difficulties.

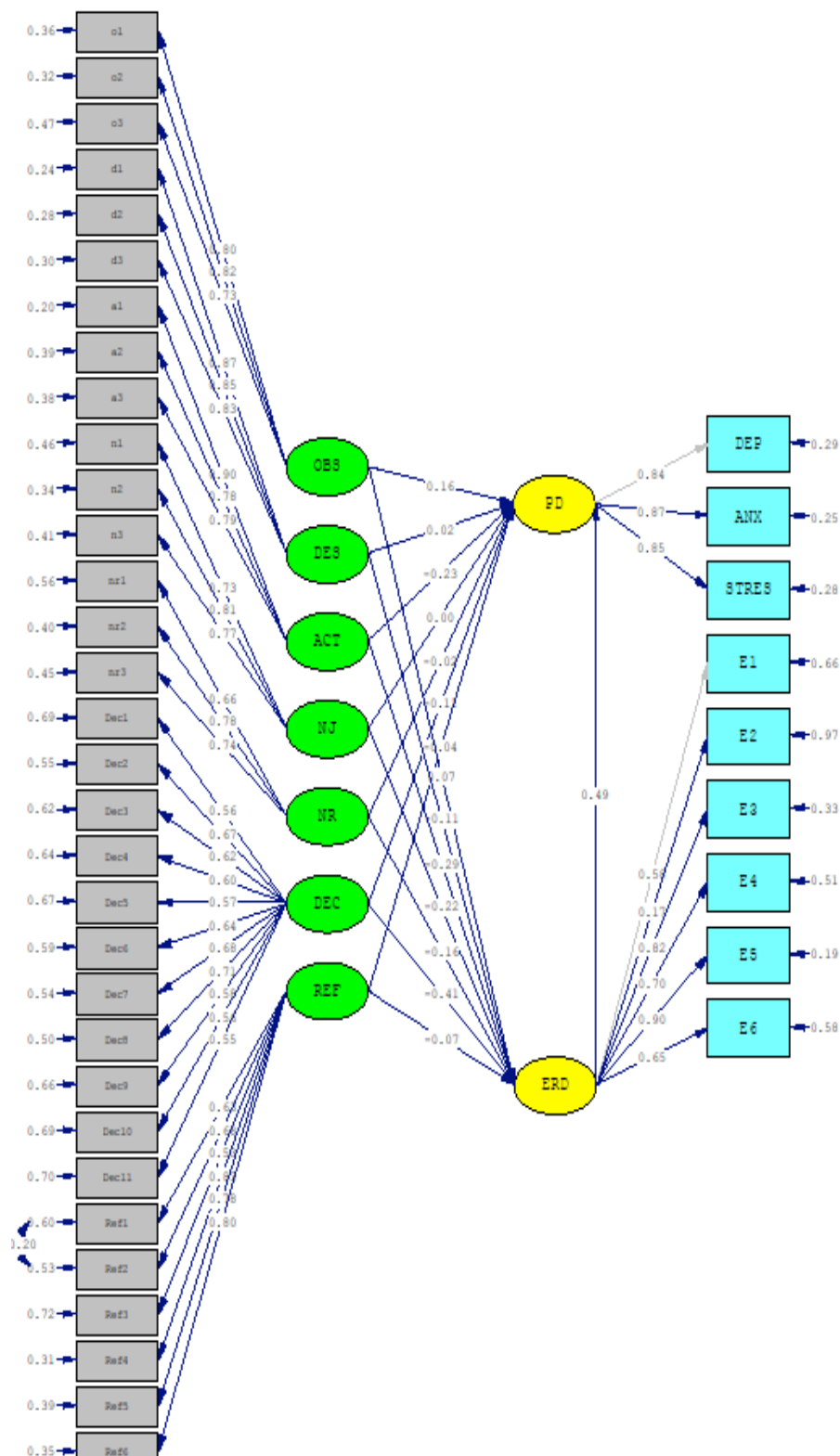


Figure 4.2 Standardized coefficients for the hypothesized model

#### ***4.3.2.2 Squared Multiple Correlations ( $R^2$ ) for the Hypothesized Model***

Decentering, reframing, five facets of mindfulness accounted for 66% variance in emotion regulation difficulties. Decentering, reframing, five facets of mindfulness and emotion regulation difficulties accounted for 57% variance in psychological distress. Therefore, the hypothesized model, overall, accounted for 57% of the variance in psychological distress.

#### **4.4 Summary of the Results**

To sum up, structural equation modeling analyses indicated that the hypothesized model fitted the data well. In terms of direct associations, except for acting with awareness and observing, none of the exogenous variables significantly predicted psychological distress when mediator was in the model. Surprisingly, observing had a significant and positive direct relationship with psychological distress. Findings about relationships between exogenous variables and emotion regulation difficulties indicated that except for observing and reframing, all exogenous variables significantly and negatively predicted emotion regulation difficulties. Reframing and observing did not significantly predict emotion regulation difficulties. The mediator role of emotion regulation difficulties were supported in the model, but reframing and observing did not indirectly predict psychological distress through emotion regulation difficulties. As expected, emotion regulation difficulties strongly predicted psychological distress. More specifically, university students who have more describing, acting with awareness, non-judging of inner experience, non-reactivity to inner experience, and decentering skills are more likely experience less emotion regulation difficulties, resulting in less psychological distress. A summary of the hypotheses testing results were presented in Table 4.5.

Table 4.5

*Results of Direct, Indirect, and Total Effects*

<i>Path</i>	<i>Path Coefficient</i>
Direct Effects	
Observing → Psyc. Distress	.16**
Describing → Psyc. Distress	.02
Acting with Awareness → Psyc. Distress	-.23**
NJ of inner experience → Psyc. Distress	.00
NR to inner experience → Psyc. Distress	-.00
Decentering → Psyc. Distress	-.11
Reframing → Psyc. Distress	-.04
Emotion Regulation → Psyc. Distress	.49**
Observing → Emotion Regulation Difficulties	.07
Describing → Emotion Regulation Difficulties	-.11*
Acting with awareness → Emotion Regulation Difficulties	-.29**
Non-judging of inner experience → Emotion Regulation Difficulties	-.22**
Non-reactivity to inner experience → Emotion Regulation Difficulties	-.16*
Decentering → Emotion Regulation Difficulties	-.41**
Reframing → Emotion Regulation Difficulties	-.07
Indirect Effects	
Observing → Emotion Regulation Difficulties → Psyc. Distress	.03
Describing → Emotion Regulation Difficulties → Psyc. Distress	-.05*
Acting with awareness → Emotion Regulation Difficulties → Psyc. Distress	-.14**
Non-judging of inner experience → Emotion Regulation Difficulties → Psyc. Distress	-.11**
Non-reactivity to inner experience → Emotion Regulation Difficulties → Psyc. Distress	-.08*
Decentering → Emotion Regulation Difficulties → Psyc. Distress	-.20**
Reframing → Emotion Regulation Difficulties → Psyc. Distress	-.03

Table 4.5 (continued)

Total Effects	
Observing → Psyc. Distress	.19**
Describing → Psyc. Distress	-.03
Acting with Awareness → Psyc. Distress	-.37**
Non-judging of inner experience → Psyc. Distress	-.10**
Non-reactivity to inner experience → Psyc. Distress	-.10
Decentering → Psyc. Distress	-.31**
Reframing → Psyc. Distress	-.08
Emotion Regulation → Psyc. Distress	.49**

*Note.* \*  $p < .05$ , \*  $p < .01$ , two tailed.

## **CHAPTER 5**

### **DISCUSSION**

In this chapter, the results of the study were discussed. In the light of these results, implications and recommendations for future research were presented. Thus, the chapter included three main sections which were discussion of the findings, implications for practice, and recommendations for future studies.

#### **5.1 Discussion of the Findings**

The present study that utilizes ERT as a frame work, aimed to examine the relationship between five facets of mindfulness, reframing, decentering and psychological distress with the indirect effect of emotion regulation difficulties among a group of university students in Turkey. The proposed model illustrated in Figure 1.1 (p. 8) was tested by utilizing Structural Equation Modeling. Both direct relationship between exogenous variables (five facets of mindfulness, reframing and decentering) and psychological distress, and indirect relationships between exogenous variables (five facets of mindfulness, reframing and decentering) and psychological distress through emotion regulation difficulties were examined. Before testing this model, pilot study was conducted to examine the psychometric properties of Experiences Questionnaire.

In the current study, the Turkish version of Experiences Questionnaire-Decentering has confirmed as one-factor structure with acceptable fit indices. The results were similar to the psychometric properties of both the original measure (Fresco et al., 2007), and the Spanish version (Soler et al., 2014). The

result of internal consistency score of Experiences Questionnaire-Decentering was satisfactory, and consistent with previous research results (e.g., Fresco et al., 2007; Gecht et al., 2014; Soler et al., 2014).

The correlation results conducted in main data with 620 undergraduate students revealed that decentering was negatively associated with psychological distress and positively associated with reappraisal and components of mindfulness. These findings were consistent with the previous results indicating significant negative relationship between symptoms of anxiety and depression, and a positive correlation between reappraisal and decentering (Fresco et al., 2007). The findings of the current study were similar with the findings of Soler et al. (2014) who reported significant negative relationship between decentering and symptoms of depression, anxiety, and stress, and positive correlation decentering and facets of mindfulness. Therefore, correlation results in the current study may demonstrate validity of the Experiences Questionnaire-Decentering. To sum up, Experiences Questionnaire-Decentering was found to be a both valid and reliable measure among a group of Turkish university students.

Relationships between the exogenous, mediator and endogenous variables indicated that describing, acting with awareness, non-judging of inner experience, non-reactivity to inner experience, decentering, and reframing skills were negatively associated with emotion regulation difficulties and psychological distress. The highest relationship was found between psychological distress and emotion regulation difficulties. Further, acting with awareness and decentering had also stronger correlations with both psychological distress and emotion regulation difficulties than other exogenous variables.

The results of the present study indicated that the proposed model fit the data well, and the hypothesized model accounted a large amount of the variance



(57%) in psychological distress. Therefore, this study yielded empirical support for the hypothesized model offered in Emotion Regulation Therapy (ERT; Mennin & Fresco, 2009).

The results of the model, very broadly, indicated that individuals who have higher ability on decentering, acting with awareness, non-reactivity to inner experience, and non-judging of inner experience were less likely to report psychological distress which was associated with less emotion regulation difficulties. Moreover, the mediator, emotion regulation difficulties, had the highest effect on psychological distress in the model. Among exogenous variables, acting with awareness and decentering had the largest effect, and describing had the lowest effect. Only, reframing variable had not any significant effect in the model, and surprisingly, observing had positive relationship with psychological distress.

In terms of emotion regulation difficulties, it was proposed that emotion regulation plays a key role in psychological distress. As expected, emotion regulation difficulties strongly predicted psychological distress. This result was consistent with earlier studies (e.g., Bardeen et al., 2012; Pepping et al., 2013; Ritschel et al., 2015). Findings also indicated that 66% of variance in emotion regulation difficulties was explained by decentering, acting with awareness, non-reactivity to inner experience, and non-judging of inner experience. The finding about the relationship between decentering and emotion regulation difficulties is in line with the study of Lafferty (2013), and the findings about relationship between mindfulness and emotion regulation difficulties were similar with the previous studies (Baer et al., 2006; Coffey & Hartman, 2008). Therefore, students who tend to (1) observe their thoughts and feelings as objective and temporary events in their mind rather than as absolute truths, (2) describe their internal experiences with words, (3) act with awareness, (4) notice their experiences without reacting them, and (5) approach their experiences without criticizing as good or bad, experience less emotion

regulation difficulties. Moreover, emotion regulation difficulties was found as a significant mediator between decentering, acting with awareness, non-reactivity to inner experience, non-judging of inner experience and psychological distress. In the remaining part, results for each exogenous variable were discussed.

Observing, which refers to ability to be aware of internal and external experiences such as sensations, cognitions, emotions, sounds, and smells (Baer et al., 2009), evaluated as an important component of mindfulness in the relevant literature (e.g., Baer et al., 2009; Kabat-Zinn, 1990), and studies also demonstrated that mindfulness have a salutary impact on psychological distress (e.g., Masuda & Tully, 2012; Ülev, 2014). Accordingly, in the present study, it was expected that as a facet of mindfulness, observing would be negatively and significantly associated with both psychological distress and emotion regulation difficulties. Contrary to the expectation, observing significantly and positively predicted psychological distress, and it did not predict emotion regulation difficulties. Although findings differed from the proposed role of observing in studies, these results were consistent with the findings of Baer et al. (2006) and Harnett et al. (2016) showed significant positive association between observing and psychological distress. On the other hand, majority of the studies reported that observing was not significantly related to psychological distress (Bowlin & Baer, 2012; Pearson et al., 2015). There are some possible reasons supporting this unexpected result. According to Baer et al. (2008), observing is an important component of mindfulness for individuals who are practicing meditation. Baer et al. (2008) investigated the differences between meditating and non-meditating sample in terms of five facets of mindfulness. Findings indicated that observing positively related to psychological distress in student sample, but negatively related to psychological distress in meditating group. Williams, Dalgleish, Karl, and Kuyken (2014) also found similar results. Baer et al. (2008) emphasized that meditation helps individuals to be aware of their internal and external

experiences without judging, so this awareness is unbiased; on the contrary, individuals who do not practice meditation may be aware of their experiences, but this awareness may be related to threatening or unpleasant stimuli. Therefore, it could be considered that observing was found positively associated with psychological distress, and it was not significantly associated with emotion regulation difficulties because of non-meditating sample in the current study.

Acting with awareness directly and negatively predicted psychological distress. These findings were in line with those of previous studies indicating negative relationship between acting with awareness and psychological distress (e.g., Bowlin & Baer, 2012; Harnett et al., 2016; Pearson et al., 2015; Slonim et al., 2015). Further, acting with awareness directly and negatively predicted emotion regulation difficulties. These results aligned with those found by Baer et al. (2006), who reported significant negative relationship between acting with awareness and emotion regulation difficulties. Extending the previous research, the present study indicated that acting with awareness predicted psychological distress through emotion regulation difficulties. In other words, students who were more capable of acting with awareness were less likely to experience psychological distress. At the same time, they were more capable of regulating their emotions.

As regards to the relationship between other dimensions of mindfulness (describing, non-judging of inner experience and non-reactivity to inner experience) and emotion regulation difficulties, results revealed that those dimensions of mindfulness were significantly and negatively linked to emotion regulation difficulties. These results of the current study were in line with Baer et al. (2006) as they reported similar results by collecting data from undergraduate students. Further, the most striking findings of the present study were non-significant direct relationships between describing, non-judging of inner experience, non-reactivity to inner experience and psychological distress, and significant indirect relationships between describing, non-judging of inner

experience, non-reactivity to inner experience and psychological distress through emotion regulation difficulties. Findings from the current study supported the previous studies that had reported a relationship between describing, non-judging of inner experience, non-reactivity to inner experience and psychological distress (e.g., Baer et al., 2006; Bowlin & Baer, 2012; Harnett et al., 2016; Pearson et al., 2015; Slonim et al., 2015), but the present study provided evidence that those relationships were indirect through emotion regulation difficulties. There were lack of prior studies which had investigated indirect relationship between facets of mindfulness and psychological distress. Thus, it was limited to compare current results with prior studies. In conclusion, describing, non-judging of inner experience, and non-reactivity to inner experience related with psychological distress when those skills are effective to reduce emotion regulation difficulties.

Considering the mindfulness research, although some studies focus on the mediator role of emotion regulation difficulties between mindfulness and a variety of endogenous variable such as alcohol use (Laferty, 2013), attachment (Pepping et al., 2013), and psychological distress (Coffey & Hartman, 2008; McDonald et al., 2016), there has been a lack of research into the components of mindfulness of these relations. Extending the related previous research, the present study proved that emotion regulation was a significant mechanism of the relationship between four components of mindfulness (acting with awareness, describing, non-judging of inner experience, and non-reactivity to inner experience) and psychological distress.

Decentering did not significantly and directly predict psychological distress, but significantly and directly predicted emotion regulation difficulties. Further, decentering linked with psychological distress via emotion regulation difficulties. The finding about negative relationship between decentering and emotion regulation difficulties is in line with the study of Lafferty (2013). In terms of the relationship between decentering and psychological distress, these

results aligned with those found by Morgan (2015), who reported significant negative relationship between decentering and psychological distress among undergraduate students. However, findings of the present study demonstrated that this relationship was completely through emotion regulation difficulties, so the relationship was not direct. Therefore, decentering may influence psychological distress because it is related to the capacity of emotion regulation.

In previous studies, decentering was examined as a mediator between mindfulness and psychological distress by Pearson et al. (2015), and they stated that there was a partial mediation between mindfulness and psychological distress through decentering. On the other hand, Carmody et al. (2009) found that decentering was not a significant mediator between mindfulness and psychological distress. In the present study, based on Emotion Regulation Therapy, decentering was evaluated as an exogenous variable which link with psychological distress through emotion regulation difficulties, and the results supported the theory. Consequently, emotion regulation difficulties were shown in the present study to be a vital factor in transmitting the salutary effects of decentering on psychological distress.

As regards to reframing, unexpectedly, it did not significantly and directly predict psychological distress and emotion regulation difficulties. Further, reframing did not significantly predict psychological distress through emotion regulation difficulties. Thus, both direct and indirect effects were non-significant. Actually, bivariate correlation results indicated that reframing strongly related to psychological distress and emotion regulation difficulties, but, Structural Equation Modelling analysis showed that reframing was nonsignificant in the model. There was a lack of research which had examined the relationship between reframing and psychological distress through emotion regulation difficulties, so there was not too much evidence to compare the present findings with the prior studies. However, the results were not parallel

with the model of Emotion Regulation Therapy (Mennin & Fresco, 2009), and with the most of previous studies (e.g., Beath et al., 2015; Garnefski et al., 2001). On the other hand, some researchers emphasized that reframing or changing content of thoughts and feelings may not be necessary or may have a limited role in therapy (Corcoran et al., 2010; Hayes, 2004; Sauer & Baer, 2010), and the reason of this was explained as, the vital point to assist individuals in distress is to change their relationship with their thoughts and feelings, not changing content of thoughts and feelings (Hayes & Feldman, 2004; Corcoran et al., 2010). Accordingly, in the present study, decentering which is related to changing relationship with thoughts and feelings was in the model. Therefore, it may be considered that reframing became non-significant because of decentering. Furthermore, the results of a meta-analysis conducted by Aldao et al. (2010) indicated that reframing had not a large effect on distress, and they implied that given the prominence of reappraisal in theories seems exaggerated. Therefore, reframing was not found as one of the factors that may influence psychological distress in the present study, this result may be consistent with the researchers supporting that reframing is not a key factor to alleviate distress.

## **5.2 Implications of the Findings to Practice**

The findings of the present study revealed that the proposed model built in accordance with the Emotion Regulation Therapy fitted the data well. According to the results, describing, acting with awareness, non-judging of inner experience, non-reactivity of inner experience were protective factors to experience higher level of emotion regulation difficulties which is a crucial factor that cause many of the psychological problems (e.g., Chambers et al., 2009; Gross & Munoz, 1995). The present study also indicated that emotion regulation difficulties have a vital role to decrease psychological distress, because it was found as a significant mediator between describing, acting with awareness, non-judging of inner experience, non-reactivity of inner experience,

and psychological distress. Based on the results, several implications for practice were stated, but the implications of the study should be evaluated cautiously because this study is a correlational study.

First, this research was guided by Emotion Regulation Therapy, and the results of the study provided empirical evidence for the applicability of ERT model in psychological distress among university students. Further, to test the proposed model in Turkish culture could offer information about the validity of the Emotion Regulation Therapy in Turkey among university students who have the similar characteristics with the current study sample.

Second, this study provided valuable information for understanding about how components of mindfulness and decentering have been linked with psychological distress. Accordingly, the present study yields that decentering, describing, non-reactivity to inner experience, and non-judging of inner experience have not an influence on psychological distress without their influence on emotion regulation. In other words, their effects on psychological distress are only effective through their effects on emotion regulation difficulties. Moreover, acting with awareness decreases psychological distress, and at the same time it decreases emotion regulation difficulties. Therefore, this study suggests that when designing a prevention or intervention model about psychological distress among university students, emotion regulation should be given prominence.

Third, the present study demonstrated that describing, acting with awareness, non-judging of inner experience, non-reactivity to inner experience and decentering had contribution to alleviate psychological distress. Thus, it could be suggested to counseling professionals working at university counseling centers to incorporate those skills into their practices to assist their clients to reduce or prevent psychological distress. Those skills also could be used to train university students to regulate their emotions. Increasing capacity to

regulate emotions would also help them to decrease psychological distress. Therefore, results of the study may encourage counselors to focus on emotion regulation skills guided by Emotion Regulation Therapy.

Fourth, findings indicated that observing was positively associated with psychological distress. For this reason, in practice, emphasizing observing skill may increase psychological distress. As recommended Desrosiersa, Klemanskib, and Nolen-Hoeksema (2013), and Baer et al. (2008), while focusing on observing skill, emphasis should be given on non-judgmental component of mindfulness. Otherwise, individuals may focus on their internal experiences which are threatening or unpleasant (Baer et al., 2008). Baer et al. (2008) also insisted on the salutary effect of observing for individuals who practicing meditation, not for non-meditator individuals. Thus, without using mindfulness meditation technique, teaching observing skill to university students could not be helpful to reduce or prevent psychological distress.

Fifth, even though, additional research is needed to clarify the relationship between reframing, decentering, mindfulness and psychological distress, reframing was not found significant in the present study. Therefore, it seems if counselors help clients to change their relationship with their thoughts, reframing may not be necessary (Corcoran et al., 2010; Hayes, 2004; Sauer & Baer, 2010). Therefore, it seems reasonable to suggest counselors to give priority to assist clients to learn decentering skill rather than reframing.

Finally, the psychometric properties of the Experiences Questionnaire (EQ; Fresco et al., 2007) were examined in Turkey. Findings revealed its validity and reliability evidences in Turkish sample. Measuring decentering accurately is important to evaluate the efficacy of theories such as Mindfulness Based Cognitive Therapy (MBCT; Teasdale et al., 1995), and Emotion Regulation Therapy (ERT; Mennin & Fresco, 2009) because decentering is one of the basic constructs of those theories (Sauer & Baer, 2010; Mennin & Fresco,



2014). Therefore, Experiences Questionnaire could be used to measure decentering by practitioners and researchers while studying with university students who have similar characteristics with current study sample.

### **5.3 Recommendations for Future Research**

This study tested a model of the relationship between five facets of mindfulness, reframing, decentering and psychological distress with the indirect effect of emotion regulation difficulties among a group of university students in Turkey. However, this research was limited to evaluate causal links because of utilizing correlational research design. Therefore, it is recommended future studies to utilize experimental research design.

Additionally, due to practical reasons, emotion regulation which is one of the ERT model mechanisms was investigated to understand psychological distress in the present study, and the results point out that the proposed model explained a large variance in psychological distress. However, there may be other factors that may influence psychological distress. For instance, apart from emotion regulation mechanism, Emotion Regulation Therapy offers two other mechanisms, motivation and contextual learning (Mennin & Fresco, 2014). Thus, it is suggested future researchers to test motivation and contextual learning mechanisms to achieve a greater understanding about psychological distress.

Furthermore, the results of the confirmatory factor analysis for the Difficulties in Emotion Regulation Scale (DERS) indicated that one item (ERD17) under the lack of emotional awareness subscale of DERS had low standardized loading. The results of the measurement model also revealed that the lack of emotional awareness subscale had low standardized loading. Those results were consistent with the researchers who supported the problems regarding the validity of the lack of emotional awareness subscale (e.g., Bardeen et al., 2012;

Medrano & Tragolo, 2016). Therefore, future studies are needed to provide additional evidence for the validity of the Turkish version of Difficulties in Emotion Regulation Questionnaire (DERS).

As recommended in the previous studies (Baer et al., 2006; Baer et al., 2009; Höfling et al., 2011; Gecht et al., 2014), the present study affirmed that components of mindfulness have different influence on emotion regulation difficulties and psychological distress. Therefore, it is confirmed that mindfulness is a complex and a multifaceted construct. In this respect, this research suggests further studies to measure components of mindfulness separately to enhance the understanding of mindfulness.

In addition, observing found as a positive predictor of psychological distress in this study. According to Baer et al. (2008), the relationship between observing and psychological well-being changes according to participant's experience of meditation. Thus, the proposed model should be retested with a sample including individuals practicing meditation.

According to results of the study, describing, acting with awareness, non-judging of inner experience and non-reactivity to inner experience were related to emotion regulation difficulties, and explain 66% variance. Further, the overall model explains 57% variance in psychological distress. For these reasons, it is recommended to develop mindfulness and decentering skills based prevention programs in universities, and to test the efficacy of the programs.

Additionally, in the current study, majority of the participants were women (69.2%), and faculty of education (59.2%) students. Therefore, it is recommended that future studies could use a more representative sample of university students.

As a final point, data were collected in the capital city of the Turkey, thus it is recommended future studies to test the same psychological distress model with participants from different universities.

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## APPENDICES

### Appendix A. Approval Letter from Middle East Technical University Human Subjects Ethics Committee

<p>UYGULAMALI ETİK ARAŞTIRMA MERKEZİ APPLIED ETHICS RESEARCH CENTER</p> <p>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</p>	<p> ORTA DOĞU TEKNİK ÜNİVERSİTESİ MIDDLE EAST TECHNICAL UNIVERSITY</p> <p>Sayı: 28620816/170 - 341</p> <p>04.04.2014</p>
<p>Gönderilen : Prof. Dr. Oya Yerin Güneri Psikolojik Danışma ve Rehberlik</p>	
<p>Gönderen : Prof. Dr. Canan Özgen  IAK Başkanı</p>	
<p>İlgi : Etik Onayı</p>	
<p>Danışmanlığını yapmış olduğunuz Psikolojik Danışma ve Rehberlik Bölümü öğrencisi Fatma Zehra Ünlü Kaynakçı'nın "Yaşantılar Ölçeğinin Türkçeye Uyarlanması: Geçerlilik ve Güvenirlilik Çalışması" isimli araştırması "İnsan Araştırmaları Komitesi" tarafından uygun görülerek gerekli onay verilmiştir.</p>	
<p>Bilgilerinize saygılarımla sunarım.</p>	
<p>Etik Komite Onayı Uygundur 04/04/2014</p>	
<p> Prof.Dr. Canan Özgen Uygulamalı Etik Araştırma Merkezi (UEAM) Başkanı ODTÜ 06531 ANKARA</p>	

08.04.2014

## Appendix B. Approval Letter from Middle East Technical University Human Subjects Ethics Committee

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ  
APPLIED ETHICS RESEARCH CENTER



ORTA DOĞU TEKNİK ÜNİVERSİTESİ  
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Sayı: 28620816/198-383

21.04.2015

Gönderilen : Prof.Dr. Oya Yerin Güneri  
Eğitim Bilimleri Bölümü

Gönderen : Prof. Dr. Canan Sümer  
IAK Başkan Vekili

İlgili : Etik Onayı

Danışmanlığını yapmış olduğunuz Psikolojik Danışma ve Rehberlik Bölümü doktora öğrencisi Fatma Zehra Ünlü Kaynakçı'nın "Üniversite Öğrencilerinde Bilinçli Farkındalık, Merkezsizleştirme (Decentering), Bilişsel Yeniden Değerlendirme ile Psikolojik İyi Oluş Arasındaki İlişki ve Duygu Düzenleme Güçlüklerinin Aracı Rolü" isimli araştırması "İnsan Araştırmaları Komitesi" tarafından uygun görülerek gerekli onay verilmiştir.

Bilgilerinize saygılarımla sunarım.

Etik Komite Onayı

Uygundur

21/04/2015

Prof.Dr. Canan Sümer  
Uygulamalı Etik Araştırma Merkezi  
( UEAM ) Başkan Vekili  
ODTÜ 06531 ANKARA

### **Appendix C. Sample Items from Experiences Questionnaire (EQ)**

1. Kendimi olduđum gibi kabul edebilirim. (I am able to accept myself as I am).
2. Stresli zamanlarda düşüncelerimi yavaşlatabilirim (I can slow my thinking at times of stress).
3. Düşünce ve duygularımı kendimden ayrı tutabilirim (I can separate myself from my thoughts and feelings).
4. Zorluklarla karşılaştığımda tepki vermek için kendime zaman tanırım (I can take time to respond to difficulties).
5. Hoş olmayan duyguları içlerinde kaybolmadan gözlemleyebilirim (I can observe unpleasant feelings without being drawn into them).

**Appendix D. Sample Items from Depression Anxiety and Stress Scale  
(DASS)**

1. Oldukça önemsiz şeyler için üzüldüğümü farkettim (I found myself getting upset by quite trivial things).
2. Hiç olumlu duygu yaşayamadığımı farkettim (I found myself getting upset by quite trivial things).
3. Kendimi üzgün ve depresif hissettim (I felt sad and depressed).
4. Olaylara aşırı tepki vermeye meyilliyim (I tended to over-react to situations).
5. Hiçbir beklentimin olmadığı hissine kapıldım (I felt that I had nothing to look forward to).

**Appendix E. Sample Items from the Difficulties in Emotion Regulation  
Scale (DERS)**

1. Ne hissettiğim konusunda netimdir (I'm clear about my feelings).
2. Ne hissettiğimi dikkate alırım (I pay attention to how I feel).
3. Duygularım bana dayanılmaz ve kontrolsüz gelir (I experience my emotions as overwhelming and out of control).
4. Ne hissettiğim konusunda hiçbir fikrim yoktur (I have no idea how I'm feeling).
5. Duygularıma bir anlam vermekte zorlanırım (I have a difficulty making sense out of my feelings).

**Appendix F. Sample Items from the Five Facets of Mindfulness  
Questionnaire (FFMQ)**

1. Yürürken vücudumda oluşan hareketlerin verdiği hislere özellikle dikkat ederim (When I'm walking, I deliberately notice the sensations of my body moving).
2. Hislerimi tanımlayan kelimeleri bulmakta iyiyimdir (I'm good at finding words to describe my feelings).
3. Ne yaptığıma dikkat etmem; çünkü ya dalıp giderim, ya endişelenirim ya da bir şekilde dikkatim dağılmış olur (I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted).
4. Şu anda olup bitene odaklanmak benim için zordur (I find it difficult to stay focused on what's happening in the present).
5. Bir şeyler yaparken konudan uzaklaşıyorum ve dikkatim kolay dağılır (When I do things, my mind wanders off and I'm easily distracted).

**Appendix G. Sample Items from the Emotion Regulation Questionnaire  
(ERQ)**

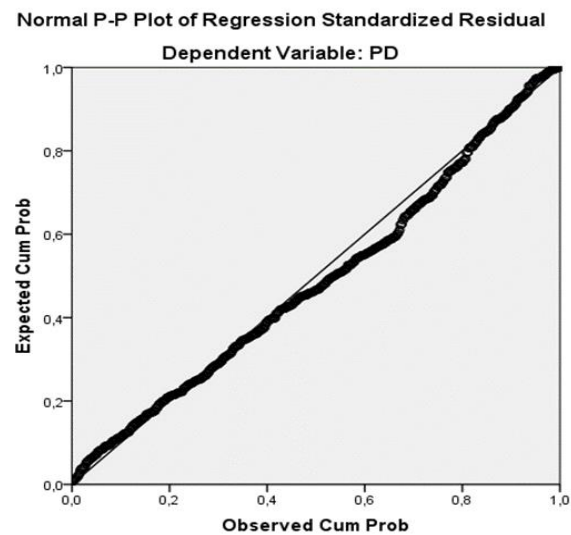
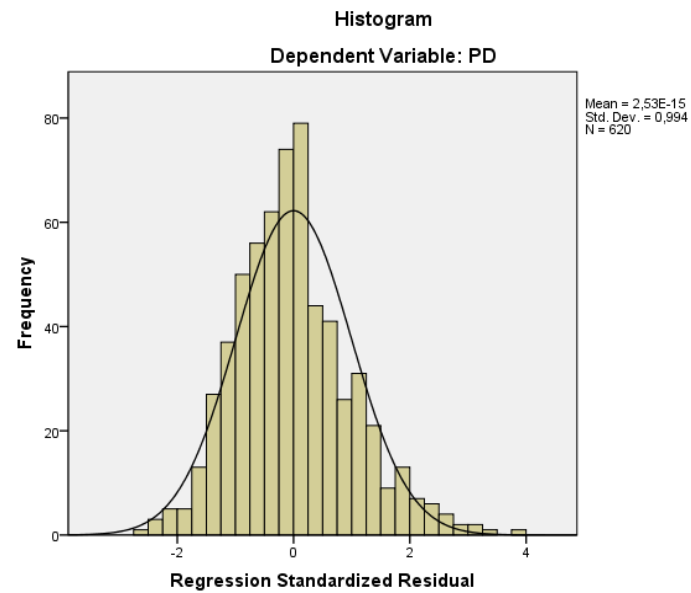
1. Olumlu duygularımın fazla olmasını istersem (mutluluk veya eğlence) düşündüğüm şeyi değiştiririm (When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about).
2. Olumsuz duygularımın az olmasını istersem (kötü hissetme veya kızgınlık gibi) düşündüğüm şeyi değiştiririm (When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about).
3. Olumlu duygularımın fazla olmasını istediğim zaman durumla ilgili düşünme şeklimi değiştiririm (When I want to feel more positive emotion, I change the way I'm thinking about the situation).
4. İçinde bulunduğum duruma göre düşünme şeklimi değiştirerek duygularımı kontrol ederim (I control my emotions by changing the way I think about the situation I'm in).
5. Olumsuz duygularımın az olmasını istersem, durumla ilgili düşünme şeklimi değiştiririm (When I want to feel less negative emotion, I change the way I'm thinking about the situation).

## Appendix H. Demographic Information Form

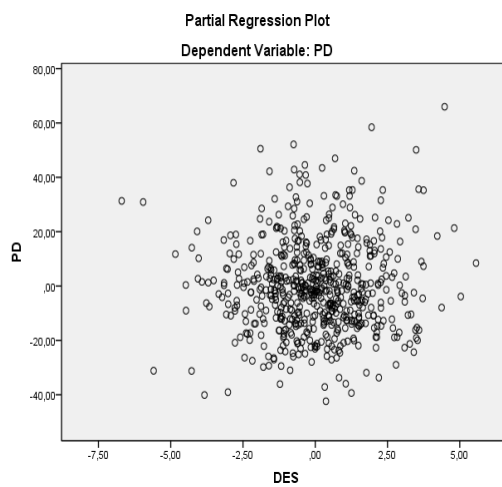
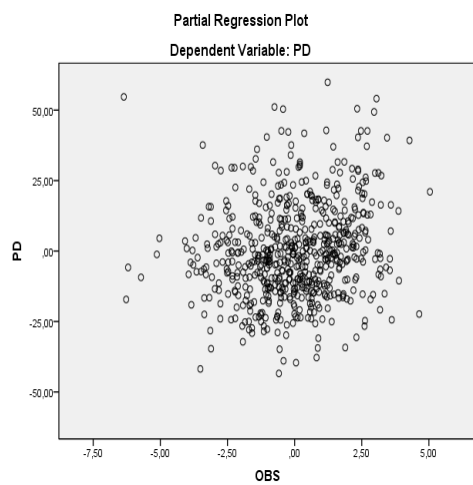
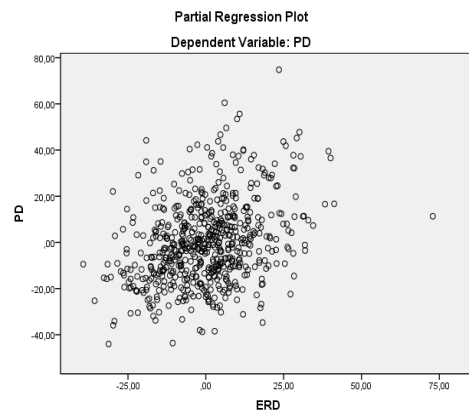
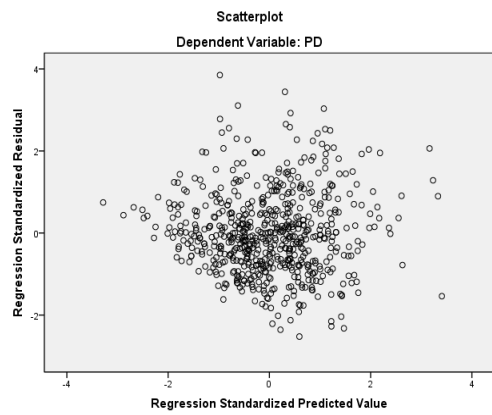
1. Cinsiyetiniz (Gender): ☐ Kadın (Female) ☐ Erkek (Male)
2. Yaşınız (Age): .....
3. Bölümünüz (Department): .....
4. Sınıfınız(Class): .....
5. Genel Akademik Ortalamanız (Cumulative GPA).....
6. Meditasyon yapıyor musunuz? (Are you practicing meditation?) ☐ Evet  
(Yes) ☐ Hayır (No)

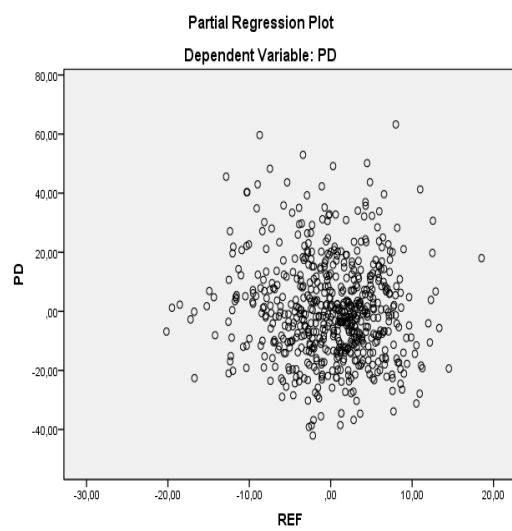
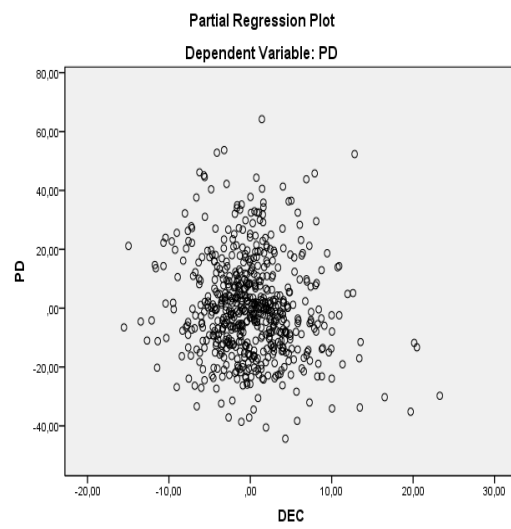
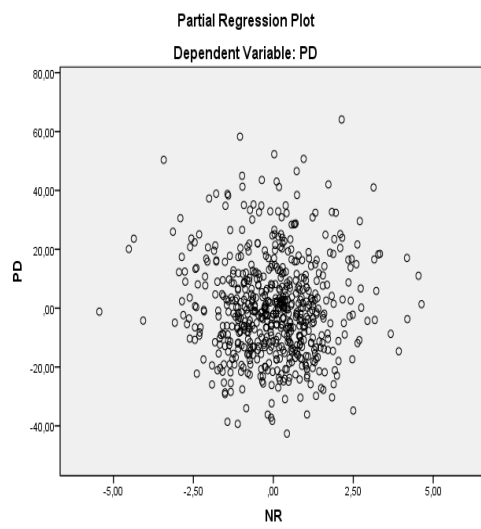
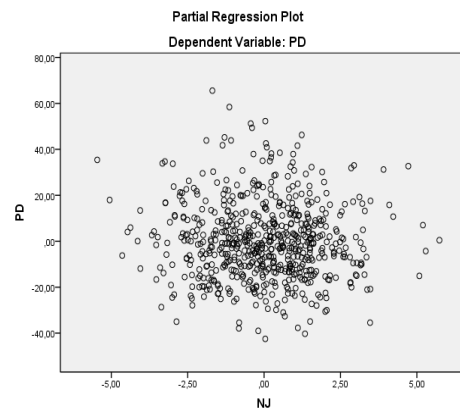
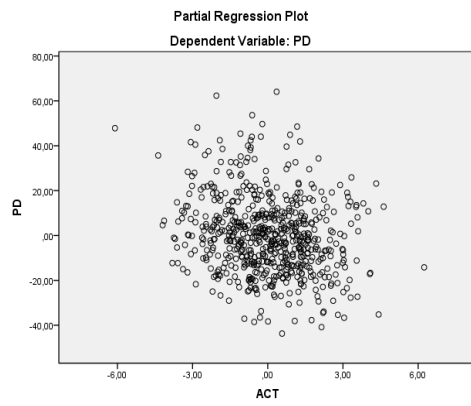


## Appendix I. Histogram and Normal P-P Plot of Residual



## Appendix J. Scatterplot and Partial Regression Plots





## **Appendix K: Curriculum Vitae**

**Fatma Zehra Ünlü Kaynakçı**

**Place of Birth and Date:** Şanlıurfa, 24.01.1987

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### **EDUCATION**

<b>Degree</b>	<b>Institution</b>	<b>Year of Graduation</b>
PhD (Integrated)	METU, Psychological Counseling and Counseling Hacettepe University, Psychological Counseling	2017
BS	and Counseling ÇEAŞ Şanlıurfa Anatolian High	2008
High School	School	2004

### **TEACHING AND PROFESSIONAL EXPERIENCE**

2010 - 2017: METU - Research Assistant

2008 - 2010: Halide Nusret Zorlutuna Primary School, Şanlıurfa - School Counselor

## **RELATED TO PROFESSIONAL EXPERIENCE**

2014 September – 2015 February: Kent State University, Department of Psychology, Kent, OH - Visiting Scholar

## **FOREIGN LANGUAGE**

Advanced English

## **PRESENTATIONS**

Ünlü, F. Z., Sancak-Aydın, G., Mutlu, T., Duru, N., Çabuk, S., & Bahçekapılı T. (2012). *Web assisted psychological first aid training for preservice counselor*. Paper presented at the Applied Education Congress, Ankara, Turkey.

Ünlü Kaynakçı F. Z., (2012). *Resilience among children from divorced parents*. Poster presented at the Applied Education Congress, Ankara, Turkey.

Yerin Güneri, O., Ünlü Kaynakçı, F. Z., & Mesutoglu C. (2012). *Children of migrant farm work families: An ecological perspective*. Paper presented at the the Applied Education Congress, Ankara, Turkey.

Ünlü Kaynakçı, F.Z. (2012). *Bereavement in disasters*. Paper was presented on the Role of Counselors on Coping with Disaster Panel Discussion at the IV. Psychological Counseling and Guidance Applications Congress, Ankara, Turkey.

Yerin Güneri, O., Ünlü Kaynakçı, F. Z., & Mesutoglu, C. (2013). *Emotional and behavioral problems of middle school students: the role of being seasonal agricultural worker and some demographic variables*. Paper presented at World Congress of Psychological Counseling and Guidance, İstanbul, Turkey.

Mesutoğlu, C., Akçabozan, B. N., Muyan, M., Aydın, G., Ünlü Kaynakçı, F. Z., & Sancak Aydın, G. (2014). *Teachers', students', and parents' perspectives on the dress code changing in schools*. Paper was presented at the 1st Eurasian Educational Research Congress, İstanbul, Turkey.

Yerin Güneri, O. Ünlü Kaynakçı F. Z. & Aydın, G. (2015). *Adaptation of the Turkish version of the Skovholt Practitioner Professional Resiliency and Self-Care Inventory*. Paper presented at the 13th National Congress of Psychological Counseling and Guidance, Mersin, Turkey.

Ünlü Kaynakçı, F. Z. (2015). *Assessing Decentering: Psychometric properties of the Turkish version of the Experiences Questionnaire*. Paper presented at the 8th Psychological Counseling and Guidance Symposium, Eskişehir, Turkey.

Ünlü Kaynakçı, F. Z. (2016). *A new approach: Emotion Regulation Therapy*. Paper presented at the VI. Psychological Counseling and Guidance Applications Congress, Gaziantep, Turkey.

## **RESEARCH PROJECT**

Project Name: Emotional and Behavioral Problems of Primary School Students of Seasonal Agricultural Work Families in Şanlıurfa.

Project Coordinator: Prof. Dr. Oya Yerin Güneri

Project Duty: Researcher

Financial Supporter: Middle East Technical University – Scientific Research Projects (ODTU – BAP)

## Appendix L: Turkish Summary / Türkçe Özet

### ÜNİVERSİTE ÖĞRENCİLERİNDE PSİKOLOJİK SIKINTIYA YÖNELİK BİR MODEL TESTİ: BİLİNÇLİ FARKINDALIK, MERKEZSİZLEŞTİRME VE BİLİŞSEL YENİDEN DEĞERLENDİRMEDE, DUYGU DÜZENLEME GÜÇLÜKLERİNİN DOLAYLI ETKİSİ

#### 1. GİRİŞ

Geçmişten günümüze, insanların neden psikolojik sıkıntı yaşadıkları ve bu sıkıntıyı azaltmak için neler yapılabileceği sıklıkla yanıt aranan sorular arasında yer almış ve bu sorular birçok araştırmanın konusu olmuştur. Hayattaki birçok alanda değişimin ve gelişimin deneyimlendiği üniversite döneminde ise psikolojik sıkıntı üzerine ayrı bir önem verilmiştir. Son yıllarda yapılan çalışmalar üniversite öğrencilerinin geçmişe kıyasla daha fazla ve daha ciddi psikolojik problemler yaşadıklarını göstermektedir (Benton, Robertson, Tseng, Newton ve Benton, 2003; Fink, 2014; Sharkin, 2012). Bland, Melton, Welle ve Bigham (2012), yaptıkları çalışmada üniversite öğrencilerinin %70'inden fazlasının okulda başarılı olma, ailesel beklentiler, yaşam koşullarındaki değişimler, üniversiteye başlama ve kariyer seçimi ile ilgili nedenlerden dolayı psikolojik sıkıntı yaşadıklarını belirlemişlerdir.

Üniversite öğrencilerinin yaşamları aslında hızlı bilimsel ve teknolojik gelişmelerle birlikte zaman içerisinde bazı değişimlere uğramıştır. Bu değişimlerin etkilerini inceleyen çalışmalar, günümüzde üniversite öğrencilerinin daha zeki, iş birliğine açık, kuralları takip etmeye ve birçok şeyi aynı anda yapmaya daha yatkın olduklarını (Brunner, Wallace, Sellers ve McCabe, 2014; Howe ve Staruss, 2000), ancak hedefledikleri amaca

başkalarından önce ulaşma ve problemleri çok hızlıca çözme konusunda kendilerini daha çok baskı altında hissettiklerini göstermektedir. Bu durum, onların en önemli önceliklerinden birinin kısa sürede herkesten daha başarılı olmak olmasına neden olmaktadır (Brunner vd., 2014). Langer (1989) da öğrencilerin sürece değil de başarıya odaklanmalarının onlarda kaygıya neden olabileceğini; böylece keşfetmeye yönelik isteklerinin azalarak dikkatsiz ve ana odaklanamayan bireyler haline gelebileceklerini belirtmektedir. Gençlerin zorlayıcı rekabet ortamlarında bulunmaları, sabırsız ve hırslı olmaları nedeniyle psikolojik problemlere daha yatkın olmaları olası görünmektedir (Brunner vd., 2014).

Üniversite öğrencileri, içlerinde bulundukları gelişimsel dönemden de kaynaklı olarak bazı güçlüklerle mücadele etmek zorunda kalırlar. Erikson'ın (1968), psikososyal gelişim kuramına göre, üniversite öğrencilerinin gelişimsel dönemi genç yetişkinlik olarak tanımlanmıştır. “Yakınlığa karşı uzaklık” dönemi olarak adlandırdığı ve kişilerarası ilişkilerin ön plana çıktığı bu dönemde, bireylerin başkalarıyla yakın ve güvenilir ilişkiler geliştirdiğini belirtmiştir. Arnett (2000) ise bu dönemi ergenlikten yetişkinliğe geçişi temsil eden “beliren yetişkinlik” (18- 29 yaş arası) evresi olarak tanımlamaktadır. Bu dönemde kişiler kendilerini ve çevrelerini tanıyarak aşk ve kariyer fırsatlarını keşfetmeye; aynı zamanda farklı bir şehire taşınma, yurttan kalma gibi yaşamlarında var olan değişimlerle baş etmeye çalışırlar (Arnett, 2007).

Günümüzde üniversite öğrencilerinin, hem kendine özgü özelliklerinden hem de gelişimsel dönemlerinden kaynaklı olarak toplumun psikolojik sıkıntıya daha yatkın bir grubu olduğu söylenebilir. Üniversite öğrencilerinde psikolojik sıkıntı sadece bireyin kendisini değil; aynı zamanda oda arkadaşı, sınıf arkadaşı ve öğretim üyeleri gibi diğer kişileri, hatta kurumları olumsuz etkileyen bir durumdur (Kitzrow, 2003). Bundan dolayı üniversite öğrencilerinin psikolojik sıkıntılarını etkileyen faktörleri incelemek ve önleyici ya da iyileştirici



müdahaleler geliřtirmek hem arařtırmacılar hem de uygulayıcılar için büyük önem taşımaktadır.

Psikolojik sıkıntı ile ilgili yapılan alan yazın çalışmalarına bakıldığında; psikolojik sıkıntının üniversite öğrencilerinde genel nüfusa göre daha yaygın olduđu (Adlaf, Gliksman, Demers ve Newton-Taylor, 2001; Larcombe vd. 2016; Stallman, 2010) ve bu durumun önemli evrensel bir problem olduđu görölmektedir (Eskin vd., 2016; Larcombe vd., 2016). Dünyada üniversite öğrencilerinin yaklaşık %33.6'sının oldukça yüksek düzeyde psikolojik sıkıntı yaşadıkları (Eskin vd., 2016) belirtilmiştir. Türkiye’de ise %30 ile %40 oranında üniversite öğrencisinin orta ya da yüksek derecede psikolojik sıkıntı yaşadığı yapılan çalışmalarda ortaya konmuştur (Bayram ve Bilgel, 2008; Demirüstü, Binboğa, Öner ve Özdamar, 2009).

Alan yazında birçok farklı teori (Psikoanalitik Kuram ve Bilişsel Yaklaşım gibi) psikolojik sıkıntıların nedenlerini, önlenmesini ve uygun bir şekilde müdahale edilmesini konu edinmiştir. Ancak günümüz değışen yaşam koşulları ve modern dünyanın karmaşıklığı, psikolojik sıkıntı ile ilgili yeni yaklaşımlara ve yöntemlere ihtiyaç duyulmasına neden olmuştur. Bu bağlamda, son yıllarda bilinçli farkındalık ön plana çıkmış olup, bilinçli farkındalık ve ruh sağlığı ile ilgili çok sayıda araştırma ve müdahale çalışmaları yürütölmektedir. Bu müdahale yaklaşımları şunlardır: Farkındalık Temelli Stres Azaltımı, Farkındalık Temelli Bilişsel Terapi, Diyalektik Davranış Terapisi ve Kabullenme ve Kararlılık Terapisi. Bilinçli farkındalık temelli yaklaşımları geleneksel bilişsel davranışçı yaklaşımla bütünleştirip duygu bilimini de entegre eden “Duygu Düzenleme Terapisi” ise bu yaklaşımlar içinde nispeten daha yenidir.

Duygu Düzenleme Terapisi, Mennin ve Fresco tarafından 2009’da geliştirilmiştir. Bireysel psikolojik danışma uygulamasına yönelik olan bu yaklaşım, danışanın motivasyon farkındalığını, duygu düzenleme kapasitesini

ve bağlamsal öğrenme birikimini arttırmayı amaçlamaktadır (Mennin ve Fresco, 2014). Motivasyonel farkındalık kapsamında, danışan için neyin önemli olduğu ve onu harekete geçiren motivasyon sistemleri (ödül sistemi ve güvence sistemi) üzerinde durulur. Duygu düzenleme kapasitesinin artırılması için ise bilinçli farkındalık, merkezsizleştirme ve bilişsel yeniden değerlendirme olmak üzere üç beceri konusunda danışanın yeterliliklerinin artması hedeflenir. Son olarak, danışanın değerlerine uygun bir yaşam sürmesine yardımcı olmak için kapsamlı ve esnek davranışsal birikiminin artması amaçlanır. Bu nedenle Duygu Düzenleme Terapisi, “Motivasyonel Farkındalık”, “Duygu Düzenleme” ve “Bağlamsal Öğrenme” olmak üzere üç mekanizma üzerinde durmaktadır (Mennin ve Fresco, 2014). Bu araştırmada Duygu Düzenleme Terapisi temel kuramsal çerçeve olarak ele alınmış ve bu kuram bağlamında sunulan mekanizmalardan birisi olan duygu düzenleme test edilmiştir. Buna göre, duygu düzenleme güçlükleri aracı rolü ile bilinçli farkındalık, merkezsizleştirme (decentering) bilişsel yeniden değerlendirme değişkenlerinin psikolojik sıkıntı ile ilişkileri incelenmiştir.

Duygu düzenleme güçlükleri normal koşullar altında kişinin duruma uygun şekilde duygularını değiştirmede veya düzenlemede yetersizlik yaşaması olarak ele alınmaktadır (Linehan, Bohus ve Lynch, 2007). Gratz ve Roemer (2004), duygu düzenlemede dört önemli noktaya işaret etmiş ve bunların herhangi birinde problem yaşanmasını duygu düzenleme güçlüğü olarak tanımlamıştır. Bunlar; duyguların farkında olmak, dürtüsel davranışları kontrol edebilmek, olumsuz duygular yaşarken istenilen amaca uygun davranışlarda bulunmak ve duygu düzenleme stratejilerini esnek bir şekilde duruma uygun olarak kullanmaktır. Duygu düzenleme, iyi oluşun temel parçalarından biri olarak değerlendirildiğinde, duygu düzenleme güçlüklerinin hem kişisel hem de kişiler arası ilişkilerde birçok probleme neden olabildiği görülmektedir (Chambers, Gullone ve Allen, 2009; Gross ve Munoz, 1995). Çalışmalar psikolojik sıkıntı ile duygu düzenleme arasındaki güçlü ilişkiyi de

vurgulamıştır (Bardeen, Fergus ve Orcutt, 2012; Pepping, O'Donovan, Zimmer, Gembeck ve Hanisch, 2014).

Bilinçli farkındalık; yaşananları, yargısızca ve şimdiki anda deneyimlemek ve dikkati amaç üzerine odaklamak olarak tanımlanmaktadır (Kabat-Zinn, 2003). Germer (2004) depresyonda olan kişilerin geçmişe yönelik üzüntü ve suçluluk hissettikleri gibi, yardıma ihtiyacı olan birçok insanın da ya geçmişleri ya da gelecekleri ile uğraş içinde olduklarını belirtmektedir. Bu kişiler anı yaşayamayarak daha fazla zarar görmektedirler. Fakat, bilinçli farkındalık bireylere geçmiş ya da gelecek üzerine odaklanmak yerine şimdi ve burada olma ve anı yaşama şansı sunmaktadır (Germer, 2004). Aynı zamanda olaylarla olduğu gibi ilişki kurmak, olaylara daha nesnel ve esnek bir şekilde tepki vermeye yardımcı olmaktadır (Brown, Ryan ve Creswell, 2007). Baer, Smith, Hopkins, Krietemeyer ve Toney (2006) ise bilinçli farkındalığın birbiriyle ilişkili ama ayrı boyutlarının olduğunu savunmaktadır. Bunlar; gözlemleme (observing), tanımlama (describing), farkındalıkla davranma (acting with awareness), içsel deneyimleri yargılamama (non-judgement of inner experience) ve içsel deneyimlere tepkisizlik (non-reactivity to inner experience) olmak üzere beş boyuttan oluşmaktadır. Bilinçli farkındalığın her bir boyutunun ruh sağlığına etkilerinin ayrı ayrı incelenmesinin önemi çalışmalarda vurgulanmıştır (Baer vd., 2006; Cardaciotto, Herbert, Forman, Moitra ve Farrow, 2008). Genel olarak değerlendirildiğinde, yapılan çalışmaların bilinçli farkındalığın psikolojik sıkıntı üzerindeki olumlu etkilerini desteklediği görülmektedir (Lafferty, 2013; Masuda ve Tully, 2012; Ülev, 2014). Ancak, bilinçli farkındalığın boyutlarının psikolojik sıkıntı üzerine etkileri ile ilgili alan yazındaki araştırma bulgularında bazı tutarsız sonuçlar olduğu da dikkat çekmektedir (Bowlin ve Baer, 2012; Duan, 2016).

Merkezsizleştirme kişinin duygu ve düşüncelerini tek bir gerçeklik olarak değerlendirmesi yerine, onları zihninden geçen geçici olaylar olarak gözlemleme becerisi olarak tanımlanmaktadır (Fresco vd., 2007). Kökleri

bilişsel yaklaşımlardan gelen merkezsizleştirme, bilinçli farkındalık temelli yaklaşımlarla daha büyük bir önem kazanmıştır ve tüm farkındalık temelli yaklaşımların ortak unsuru olarak görülmektedir (Baer ve Huss, 2008). Merkezsizleştirme ile ilgili yapılan çalışmalarda; merkezsizleştirmenin depresyon (Fresco, Segal, Buis ve Kennedy, 2007; McCracken ve Gutierrez-Martinez, 2013) ve sosyal kaygı (Hayes-Skelton ve Graham, 2012) ile olumsuz ilişki içinde olduğu belirtilmiştir. Psikolojik sıkıntı ve merkezsizleştirme ile ilgili az sayıda çalışma bulunmakla birlikte, bulgular merkezsizleştirme becerisi arttıkça psikolojik sıkıntının azaldığına işaret etmektedir (Morgan, 2015; Pearson, Brown, Bravo ve Witkiewitz, 2015).

Bilişsel yeniden değerlendirme ise bir durum hakkındaki düşünce yapısını değiştirerek durumun duygusal etkisini azaltma becerisi olarak tanımlanmaktadır (Gross, 2007). Bilişsel yeniden değerlendirme becerisi yüksek olan kişilerin daha az depresyon, kaygı (Dennis, 2007) ve stres (Moore, Zoellner ve Mollenholt, 2008) belirtileri gösterdikleri ve iyi oluşlarının daha yüksek düzeyde olduğu görülmüştür (Haga, Kraft ve Corby, 2009). Psikolojik sıkıntı ve bilişsel yeniden değerlendirme ile ilgili olarak, çalışmaların büyük bir çoğunluğu bilişsel yeniden değerlendirmenin psikolojik sıkıntıyı azaltan yönünü vurgulamaktadır (e.g., Garnefski vd., 2002; Shiota, 2006; Talasman, 2014). Fakat bazı çalışmalarda bilişsel yeniden değerlendirmenin psikolojik sıkıntıyı azaltan gerekli bir beceri olmadığı, önemli olanın kişinin düşüncelerinin içeriğini değiştirmek değil, kişinin düşünceleri ile ilişkilerini değiştirmek olduğu ifade edilmektedir (Aldao, Nolen-Hoeksema ve Schweitzer, 2010; Corcoran vd., 2010; Hayes ve Feldman, 2004).

Bilinçli farkındalık, merkezsizleştirme ve bilişsel yeniden değerlendirme becerilerini duygu düzenleme becerileri olarak ele alan Duygu Düzenleme Terapisi modeli, bilinçli farkındalığın psikolojik sağlık üzerindeki etkisini açıklamada yeni bir bakış açısı sunmaktadır. Bu bağlamda, bu çalışmanın amacı Duygu Düzenleme Terapisi kuramsal çerçevesini temel alarak üniversite

öğrencilerinde bilinçli farkındalığın beş boyutu, merkezsizleştirme, bilişsel yeniden değerlendirme ile psikolojik sıkıntı arasındaki ilişkide duygu düzenleme güçlüklerin aracı rolünü incelemektir. Duygu Düzenleme Terapisi ile ilgili yapılacak Türkiye’deki ilk çalışmalardan biri olarak bu çalışmanın üniversite öğrencilerinde ruh sağlığını koruma ve iyileştirme anlamında önemli bilgiler sunacağı ve gelecekte yapılacak deneysel çalışmalara ışık tutacağı düşünülmektedir.

### **1.1 Araştırmanın Amacı**

Bu çalışmanın amacı, üniversite öğrencilerinde bilinçli farkındalığın beş boyutu (gözlemlene, tanımlama, farkındalıkla davranma, içsel deneyimleri yargılamama ve içsel deneyimlere tepkisizlik), merkezsizleştirme ve bilişsel yeniden değerlendirme ile psikolojik sıkıntı arasındaki ilişkide duygu düzenleme güçlüklerinin dolaylı etkisini incelemektir.

### **1.2 Araştırmanın Önemi**

Üniversite öğrencilerinde bilinçli farkındalığın beş boyutu, merkezsizleştirme, bilişsel yeniden değerlendirme ile psikolojik sıkıntı arasındaki ilişkide duygu düzenleme güçlüklerinin dolaylı etkisini incelemeyi amaçlayan bu çalışmanın önemi, teori, araştırma ve uygulama açılarından olmak üzere üç başlık altında ele alınmıştır.

Teorik açıdan ele alındığında; bilinçli farkındalık temelli yaklaşımları geleneksel bilişsel davranışçı yaklaşımla bütünleştirip duygu bilimini de entegre eden Duygu Düzenleme Terapisi ile ilgili var olan alan yazının ağırlıklı olarak klinik örneklem üzerine temellendiği görülmektedir. Söz konusu çalışmaların bulguları, yaklaşımın etkililiğine işaret etmektedir (Fresco, Mennin ve Heimberg, 2013; Mennin ve Fresco, 2014; Mennin, Fresco, Ritter ve Heimberg, 2015). Bu nedenle, Duygu Düzenleme Terapisi yaklaşımının

önleyici rolünü ortaya koyacak klinik olmayan örnekleme yapılacak çalışmaların artarak devam etmesi önem taşımaktadır. Aynı zamanda ülkemizde bu konu ile ilgili yayınlanmış bir çalışma bulunmamaktadır. Duygu Düzenleme Terapisinin temel kuramsal çerçeve olarak ele alındığı bu araştırma, üniversite öğrencilerinde psikolojik sıkıntıyı işlemesi bağlamında özgün bir çalışmadır.

Psikolojik danışma araştırma ve kuramlarının geliştirilmesi ve var olan araştırma ve teorilerin gözden geçirilmesinde, değişkenler arasında karmaşık ilişkilerin çalışılmasının büyük katkı sağlayacağı vurgulanmaktadır (Gonzler, Chen, Wu ve Zhang, 2013; Heppner, Wampold ve Kivlighan, 2008). Bu çalışmanın amacı doğrultusunda çok değişkenli ilişkileri inceleme amacıyla kullanılan Yapısal Eşitlik Modellemesi (YEM) ile bilinçli farkındalık, merkezsizleştirme, bilişsel yeniden değerlendirme ve psikolojik sıkıntı arasındaki ilişkiler anlaşılmaya çalışılmıştır. Bu kapsamda, çalışmanın psikolojik sıkıntı ile ilgili model geliştirilmesine ve var olan araştırma ve teorilere önemli bilgiler sunacağı düşünülmektedir.

Teorik olarak çalışmanın önemi konusunda bir diğer nokta ise, bilinçli farkındalığın olumlu etkisini inceleyen çalışmalar olmasına rağmen (Shapiro, Carlson, Astin ve Freedman, 2006; Coffey ve Hartman, 2008), bu olumlu etkiyi yaratan faktörlerin belirlenememiş olmasıdır (Sauer ve Baer, 2010). Bu nedenle, çalışmanın bilinçli farkındalığın psikolojik sıkıntıları nasıl azalttığına dair teorik bir modeli test ederek, bu faktörlere ilişkin bir açıklama sunacağı ve bu yolla alan yazına katkı sağlayacağı düşünülmektedir.

Çalışmanın araştırma anlamında önemine bakıldığında, alan yazında bilinçli farkındalığın boyutları, merkezsizleştirme, bilişsel yeniden değerlendirme, duygu düzenleme güçlükleri ve psikolojik sıkıntı arasında doğrudan ilişkileri inceleyen çok sayıda çalışma bulunmasına rağmen üniversite öğrencilerinde psikolojik sıkıntı konusuna farklı açıklamalar sunabilecek dolaylı etkileri de

inceleyen çok az sayıda çalışma bulunmaktadır. Hem doğrudan hem de dolaylı etkileri inceleyen bu çalışmada test edilecek olan psikolojik sıkıntı modelinin alan yazına bu anlamda katkı sağlayacağı düşünülmektedir.

Son yıllarda bilinçli farkındalığın gerek uygulamada gerekse bilimsel araştırmalarda Türkiye’de de ön plana çıktığı gözlenmektedir. Ancak, şimdiye kadar yapılan çalışmaların neredeyse tamamı, bilinçli farkındalığı tek faktörlü bir yapı olarak ele almıştır (örn., Albayrak, 2015; Kocaefe, 2013; Özyeşil, Arslan, Kesici ve Deniz, 2011, Ülev, 2014). Oysa ki, birçok çalışma bilinçli farkındalığın birbirinden ayrı boyutları içeren çok yönlü bir yapı olduğunu göstermektedir (örn., Baer vd., 2006; Cardaciotto vd., 2008). Bu bağlamda, yapılan çalışmanın Türkiye’deki bir grup üniversite öğrencisinde bilinçli farkındalığın boyutlarının psikolojik sıkıntılarıyla nasıl bir ilişki içinde bulunduğu yönünde bilgiler sunması beklenmektedir.

Araştırmanın amacı doğrultusunda, Türkçe’ye uyarlanan Yaşantılar Ölçeği (EQ; Fresco vd., 2007) merkezsizleştirme becerisini hem üniversite öğrencilerinde hem de klinik örnekleme ölçmek için kullanılan ve Almanya (Gecht, Kessel, Mainz, Gaugle, Drueke, Scherer ve Forkmann, 2014), Japonya (Kurihara, Hasegawa ve Nedate, 2011) ve İspanya (Soler vd., 2014) gibi bir çok farklı kültürde uyarlama çalışması yapılan bir ölçektir. Yapılan çalışmalar, ölçeğin merkezsizleştirme becerisini değerlendirmek için geçerli ve güvenilir olduğunu göstermiştir. Bu nedenle, Yaşantılar Ölçeği’nin Türkçe’ye uyarlama çalışmasının bilinçli farkındalık temelli yaklaşımlarla, psikolojik iyi oluştaki önemli rolünün daha çok fark edildiği merkezsizleştirme becerisini ölçmek için alana yeni bir ölçme aracı kazandırması açısından önemli olduğu düşünülmektedir.

Uygulamada ise, araştırmanın üniversite öğrencilerinde bilinçli farkındalığın beş boyutu, merkezsizleştirme ve bilişsel yeniden değerlendirme olmak üzere psikolojik sıkıntı ile ilişkili faktörleri incelemesi bağlamında önleyici ve

koruyucu alıřmaların planlanabilmesi aısından nem tařıdıėı dřnlmektedir. Bunun yanısıra, niversitelerdeki psikolojik danıřma merkezleri, ėrencilerin psikolojik iyi oluřlarını arttırmaya ynelik hizmetler sunmaktadırlar. Merkezlerin bu hizmetleri sunarken gnmz niversite ėrencilerinin ihtiyalarını gz nne almaları beklenmektedir (Bland vd., 2012; Neilans, 2007; Kitzrow, 2003). Duygu Dzenleme Terapisi gibi aėdař yaklařımların bu konuda psikolojik danıřmanlara nemli bir kaynak oluřturduėu dřnlmektedir. ėrenciler en ok bireysel danıřma talebi ile psikolojik danıřma merkezlerine bařvurmaktadırlar. Bu doėrultuda niversite psikolojik danıřma merkezlerinde alıřan psikolojik danıřmanlar zamanlarının byk oėunluėunu bireysel danıřmaya ayırmaktadırlar (Sharkin, 2012). Tm bunlar dikkate alındıėında, bireysel danıřmaya dayalı aėdař bir yaklařım olan Duygu Dzenleme Terapisi temel kuramsal erevesi kapsamında niversite ėrencilerinde psikolojik sıkıntı ile ilgili bir model test eden bu alıřmanın, niversitelerde psikolojik danıřma hizmetleri sunan uzmanlara uygulamaya ynelik bilgiler sunması beklenmektedir.

## **2. YNTEM**

### **2.1 Arařtırmanın Deseni**

niversite ėrencilerinde bilinli farkındalık, merkezsizleřtirme, biliřsel yeniden deėerlendirme ile psikolojik sıkıntı arasındaki iliřkide duygu dzenleme glklerinin dolaylı etkisini incelemek iin iliřkisel arařtırma deseni kullanılmıřtır. Bu arařtırma deseni iki veya daha fazla deėiřken arasındaki iliřki hakkında bilgi edinmeyi saėlamaktadır (Fraenkel ve Wallen, 2006).



## 2.2 Örneklem

Bu çalışmanın verileri, Ankara’da bir devlet üniversitesinde okuyan 650 lisans öğrencisinden uygun örnekleme yöntemi kullanılarak elde edilmiştir. Katılımcılardan 30 kişi, veri setindeki bazı ölçekleri yanıtlamadıkları için örneklemden çıkarılmıştır. Bu nedenle, çalışmaya 429 kadın (%69.2) ve 191 erkek (%30.8) olmak üzere 620 lisans öğrencisi katılmıştır. Katılımcıların yaş aralığı 18 ve 30 arasında değişmektedir ve yaş ortalaması 21.88’dir ( $ss = 1.68$ ). Fakülte dağılımına bakıldığında, 367’sinin (%59.2) Eğitim Fakültesi, 131’inin (%21.1) Mühendislik Fakültesi, 72’sinin (%11.6) Fen Edebiyat Fakültesi, 40’ının (% 6.5) İktisadi ve İdari Bilimler Fakültesi ve 10’unun (%1.6) Mimarlık Fakültesi öğrencileri olduğu görülmektedir. Sınıf düzeyinde ise 144’ü (%23.2) birinci sınıf, 93’ü (%15.0) ikinci sınıf, 177’si (%28.5) üçüncü sınıf, 199’u (% 32.1) dördüncü sınıf öğrencisinden oluşmuş; 7 öğrenci (%1.1) sınıfını belirtmemiştir. Katılımcıların akademik başarı ortalamaları .47 ve 3.99 arasında değişiklik göstermiştir.

## 2.3 Veri Toplama Araçları

Bu çalışmada veri toplama araçları olarak, Depresyon, Anksiyete ve Stres Ölçeği (DASÖ; Lovibond ve Lovibond, 1995), Duygu Düzenleme Ölçeği (DDÖ; Gross ve John, 2003), Yaşantılar Ölçeği (YÖ; Fresco vd., 2007), Beş Boyutlu Bilinçli Farkındalık Ölçeği (BBBFÖ; Baer vd., 2006), Duygu Düzenlemede Güçlükler Ölçeği (DDGÖ; Gratz ve Roemer, 2004) kullanılmıştır. Yaşantılar Ölçeği’nin (Fresco vd., 2007) uyarlaması bu araştırmanın pilot çalışması kapsamında, 2013-2014 akademik yılı Bahar döneminde, 394 lisans öğrencisinden toplanan veriler üzerinden yapılmıştır. Diğer ölçeklerin geçerlik ve güvenirlik analizleri ise ana veri seti üzerinden test edilmiştir.

**Yaşantılar Ölçeği** (Fresco vd., 2007): Yaşantılar ölçeği merkezleştirme ve ruminasyon olmak üzere iki alt ölçekten oluşmaktadır. Bu çalışmanın ana veri setinde sadece merkezleştirme alt ölçeği kullanılmıştır. Merkezleştirme 11 maddeden oluşan 5'li likert tipinde bir ölçektir. Ölçekten alınabilecek en düşük puan 11 en yüksek puan 55'tir. İç tutarlılık katsayısı Yaşantılar Ölçeği Merkezleştirme orijinal formu için 0.83'tür (Fresco vd., 2007). Çalışma kapsamında araştırmacı tarafından ölçeğin Türkçe'ye uyarlama çalışması yapılmıştır.

Yaşantılar Ölçeği'nin öncelikle Türkçe çevirisi sonra İngilizce geri çevirisi yapılmış, hem uzman görüşleri, hem de bir grup üniversite öğrencisinden geri bildirim alınmış ve ölçeğin Türkçe formu oluşturulmuştur. Çalışmaya, Ankara'da bir devlet üniversitesinde okumakta olan 394 üniversite öğrenci katılmış ve veri tarama işlemi sonucunda kayıp veri nedeni ile örneklem sayısı 363 (251 kadın, 112 erkek) olarak belirlenmiştir. Katılımcıların yaş aralığı 18 ve 31 arasında değişmektedir ve yaş ortalaması 21.90'dır ( $ss = 2.27$ ). Ölçek maddelerinin ortalaması ise 2.74 ve 4.13 arasında değişmektedir. Ölçeğin geçerliğini test etmek için LISREL 8.80 programı kullanılarak Doğrulayıcı Faktör Analizi (DFA) yapılmış ve güvenilirliğini belirlemek için Cronbach alfa iç tutarlılık katsayısı hesaplanmıştır.

Çok değişkenli normal dağılım sayıltısı sağlanamadığı için Maksimum olasılık yerine Güçlü maksimum olasılık (Robust maximum likelihood) metodu kullanılarak yapılan DFA sonucuna göre, Yaşantılar Ölçeği'nin iki faktörlü yapısı doğrulanmıştır (Satorra-Bentler  $\chi^2/df = 2.76$  ( $p < .001$ ),  $CFI = .91$ ,  $GFI = .93$ ,  $SRMR = 0.06$ ,  $RMSEA = 0.07$  ve  $NNFI = 0.90$ ). İç tutarlılık katsayıları, merkezleştirme alt ölçeği için .80 ancak ruminasyon alt ölçeği için .53 olarak bulunmuştur. Güvenilir olmayan bir ölçeğin geçerli olmasını beklemek uygun bulunmamaktadır (Fraenkel ve Wallen, 2006). Bu nedenle Ruminasyon alt ölçeğinin yeterli güvenilirliğe sahip olmamasından hareketle, alan yazındaki diğer araştırmacıların önerileri (Fresco vd., 2007; Soler vd., 2014) dikkate

alınarak sadece merkezsizleştirme maddeleri ile analiz tekrar edilmiştir. Buna göre, ölçeğin tek faktörlü yapısının doğrulandığı görülmüştür (Satorra-Bentler  $\chi^2/df = 3.05$ ,  $RMSEA = 0.07$ ;  $GFI = .93$ ,  $CFI = .94$ ,  $SRMR = 0.06$ ,  $NFI = .92$  ). İç tutarlılık katsayısı ise merkezsizleştirme alt ölçeği için .80 olarak hesaplanmıştır.

Tüm sonuçlara bakıldığında, ölçeğin orjinal formu ile Türkçe formu arasında sadece iki maddede fark bulunmuştur. Bunlar; Madde 17 (*Aslında düşüncelerimden ibaret olmadığımı görebiliyorum.*) çalışmanın örnekleminde anlamlı sonuçlar vermezken orjinal formda anlamlı sonuçlar vermiştir ve Madde 5 (*Bir şeyler yanlış gittiği zaman kendime nazik davranırım.*) orijinal formda anlamsız sonuçlar verirken bu örnekleminde anlamlı sonuçlar vermiştir. Çalışmanın sonuçları, Fresco ve arkadaşları (2007) tarafından geliştirilen Yaşantılar Ölçeği Merkezsizleştirme boyutunun Türkiye’de üniversite öğrencileri örnekleminde psikometrik açıdan güvenilir ve geçerli bir ölçme aracı olduğunu göstermektedir. Hem DFA sonuçlarının hem de iç tutarlılık katsayısının orijinal çalışmada (Fresco vd., 2007) elde edilen bulgularla benzer olduğu görülmüştür.

***Depresyon, Anksiyete ve Stres Ölçeği*** (DASÖ; Lovibond ve Lovibond, 1995): Ölçek depresyon, kaygı ve stres olmak üzere üç alt ölçekten oluşmaktadır. Her bir alt ölçeği 14 madde olmak üzere toplam 42 maddeden oluşan, 4’lü likert tipinde bir ölçektir. Türkçe’ye Uncu, Bayram ve Bilgel (2007) tarafından uyarlanmıştır. Ölçeğin iç tutarlılık katsayısı orijinal formu için 0.84 ile 0.91 arasında değişmekteyken (Lovibond ve Lovibond, 1995); Türkçe formu için üniversite öğrencileri örnekleminde 0.86 ve 0.92 arasında değişmektedir (Bilgel ve Bayram, 2007). Bu araştırmada, ölçeğin iç tutarlılık katsayısı depresyon alt ölçeği için 0.94, kaygı için 0.89 ve stres için 0.91 olarak bulunmuştur. Ölçeğin tümü için iç tutarlılık katsayısı ise 0.96’dır.

***Duygu Düzenlemede Güçlükler Ölçeği*** (DDGÖ; Gratz ve Roemer, 2004): Ölçek, duygu düzenleme güçlüklerinin; duygusal farkındalık eksikliği, duygusal netlik eksikliği, olumsuz duyguları kabul etmeme, strateji oluşturma eksikliği, dürtüsel davranışlar üzerinde kontrol eksikliği, amaca yönelik davranışlara ilgi duymada zorluklar olmak üzere farklı boyutlarını ölçmek için geliştirilmiştir ve 36 maddeden oluşmaktadır. Türkçe'ye Rugancı ve Gençöz (2010) tarafından uyarlanmıştır. Ölçeğin iç tutarlılık katsayısı orijinal formu için 0.80 ile 0.90 (Gratz ve Roemer, 2004) arasında iken, Türkçe formu için 0.75 ile 0.90 arasındadır (Rugancı ve Gençöz, 2010). Bu çalışmada, iç tutarlılık katsayıları alt ölçekler için 0.70 ve 0.90 arasında değişmekte olup tüm ölçek için 0.93'tür.

***Beş Boyutlu Bilinçli Farkındalık Ölçeği*** (BBBFÖ; Baer vd., 2006): ölçek bilinçli farkındalığı; gözlemleme, tanımlama, farkındalıkla davranma, içsel deneyimleri yargılamama ve içsel deneyimlere tepkisizlik olmak üzere beş boyutta değerlendirmek üzere geliştirilmiştir. Beş Boyutlu Bilinçli Farkındalık Ölçeği 39 maddeden oluşan 5'li likert tipinde bir ölçektir. Ölçek Türkçe'ye Kınay (2013) tarafından uyarlanmıştır. İç tutarlılık katsayıları orijinal formu için 0.75 ile 0.91 arasında değişmekte iken (Baer vd., 2006); Türkçe formu için bu değerler 0.67 ve 0.85 arasında değişmektedir (Kınay, 2013).

Bu çalışma kapsamında ölçeğin iç tutarlık katsayıları; gözlemleme (observing) alt boyutu için 0.82, tanımlama (describing) için 0.89, farkındalıkla davranma (acting with awareness) için 0.86, içsel deneyimleri yargılamama (nonjudgement of inner experience) için 0.81 ve içsel deneyimlere tepkisizlik (nonreactivity to inner experience) alt boyutu için 0.77 bulunmuştur. Tüm ölçeğin iç tutarlılık katsayısı ise 0.74 olarak hesaplanmıştır.

***Duygu Düzenleme Ölçeği*** (DDÖ; Gross ve John, 2003): DDÖ bilişsel yeniden değerlendirme ve bastırma olmak üzere iki alt boyuttan ve 10 maddeden oluşan 7'li likert tipinde bir ölçektir. Ölçek Türkçe'ye Yurtsever (2004) tarafından

uyarlanmıştır. Orijinal formda iç tutarlılık katsayısı bilişsel yeniden değerlendirme alt ölçeği için 0.79, bastırma alt ölçeği için 0.73'tür (Gross ve John, 2003). Türkçe formu için iç tutarlılık katsayıları ise bilişsel yeniden değerlendirme alt ölçeği için 0.85, bastırma alt ölçeği için ise 0.78'dir (Yurtsever, 2008). Bu çalışmada ölçeğin bilişsel yeniden değerlendirme alt ölçeği kullanılmıştır. Bilişsel yeniden değerlendirme alt ölçeği için iç tutarlılık katsayısı 0.86 olarak hesaplanmıştır.

***Kişisel Bilgi Formu:*** Kişisel bilgi formu katılımcıların cinsiyet, yaş, sınıf, fakülte, bölüm ve meditasyon yapıp yapmadıklarına dair bilgileri edinebilmek için araştırmacı tarafından hazırlanmıştır.

## **2.4 İşlem Yolu**

Orta Doğu Teknik Üniversitesi Uygulamalı Etik Araştırma Merkezi'nden izin alındıktan sonra tüm ölçme araçlarını içeren bir kitapçık oluşturulmuştur. Uygulama 2014-2015 eğitim-öğretim yılında, öğretim elemanlarından ders saatlerinde uygulama yapmak için izin ve randevu alındıktan sonra belirlenen saatlerde araştırmacı tarafından gerçekleştirilmiştir. Uygulama öncesinde araştırma hakkında öğrencilere bilgi verilmiş ve sadece gönüllü olan kişilerin çalışmaya katılması sağlanmıştır.

## **2.5 Verilerin Analizi**

Üniversite öğrencilerinde bilinçli farkındalık, merkezsizleştirme ve bilişsel yeniden değerlendirme ile psikolojik sıkıntı arasındaki ilişkide duygu düzenleme güçlüklerinin aracı rolü LISREL 8.80 kullanılarak incelenmiş ve Yapısal Eşitlik Modeli (YEM) ile test edilmiştir.

## 2.6 Çalışmanın Sınırlılıkları

Bu çalışma bazı sınırlılıklar barındırmaktadır. İlk olarak, bu araştırma ilişkisel bir araştırma olduğu için nedensellik hakkında çıkarımlarda bulunulmamaktadır. İkinci olarak uygun örnekleme yöntemi kullanıldığı için çalışmanın genellenebilirliği sınırlılık içermektedir. Üçüncü olarak, bu çalışma tarama yöntemi kullanılarak gerçekleştirildiği ve katılımcılara anket uygulaması yapıldığı için katılımcıların kendilerine verilen veri toplama araçlarını içtenlikle ve nesnel olarak yanıtladıkları sayılına dayanmaktadır.

## 3. BULGULAR

Gerekli analizlerin yapılmasından önce kayıp değerler, uç değerler, doğrusallık ve normallik sayıltıları test edilmiştir. Normal dağılım varsayımına bakıldığında basıklık ve çarpıklık değerlerinin +3 ile -3 arasında olduğu görülmüştür (Tabachnick ve Fidell, 2007). Ancak çok değişkenli normal dağılım sayıltısı sağlanamadığı için Maksimum olasılık yerine Güçlü maksimum olasılık (Robust maximum likelihood) metodu kullanılmıştır.

YEM analizi gerçekleştirilmeden önce, gözlenen değişkenler ile gizil değişkenlerin ilişkisini inceleyen ölçüm modeli test edilmiştir. Ölçüm modelinde 9 gizil değişken bulunmaktadır. Bunlar; psikolojik sıkıntı (depresyon, kaygı ve stres gözlenen değişkenler), duygu düzenleme güçlükleri (6 alt boyut gözlenen değişkenler), bilinçli farkındalığın 5 boyutudur (her alt boyut için üç parselleme gözlenen değişken). Ölçüm modeli sonucu elde edilen katsayıların kabul edilebilir uyum indekslerine sahip olduğu görülmüştür. Buna göre, Satorra-Bentler  $X^2 (2636.42)/df (742) = 3.5$  ( $p < .001$ ),  $RMSEA = 0.06$  (90 % CI: 0.05-0.06),  $CFI = 0.95$ ,  $SRMR = 0.08$ ,  $NNFI = 0.94$  ve  $NFI = 0.93$ 'tür. Sonuçlar, gizil değişkenlerin gözlenen değişkenler tarafından uygun şekilde ölçüldüğünü göstermektedir.

Ölçüm modeli test edildikten sonra YEM analizi gerçekleştirilmiştir. YEM analizi sonuçları modelin veriye uyum sağladığını ve uyum iyiliği indekslerinin kabul edilebilir düzeyde olduğunu göstermiştir. Modelin ki kare/serbestlik derecesi oranı 3.5, CFI değeri 0.95, NNFI değeri 0.94, SRMR değeri 0.08 ve RMSEA değeri 0.06 olarak bulunmuştur.

Doğrudan etkiler incelendiğinde, psikolojik sıkıntı, duygu düzenleme güçlükleri ( $\beta = .49, p < .01$ ), gözlemlene ( $\beta = .16, p < .01$ ) ve farkındalıkla davranma ( $\beta = -.23, p < .01$ ) tarafından doğrudan yordanmaktadır. Ancak, psikolojik sıkıntı, merkezsizleştirme ( $\beta = -.11, p > .05$ ), tanımlama ( $\beta = .02, p > .05$ ), içsel deneyimleri yargılamama ( $\beta = .00, p > .05$ ), içsel deneyimlere tepkisizlik ( $\beta = -.00, p > .05$ ) ve bilişsel yeniden değerlendirme ( $\beta = -.04, p > .05$ ) tarafından anlamlı ve doğrudan yordanmamaktadır. Duygu düzenleme güçlükleri ise tanımlama ( $\beta = -.11, p < .05$ ), farkındalıkla davranma ( $\beta = -.29, p < .01$ ), içsel deneyimleri yargılamama ( $\beta = -.22, p < .01$ ), içsel deneyimlere tepkisizlik ( $\beta = -.16, p < .05$ ) ve merkezsizleştirme ( $\beta = -.41, p < .01$ ) tarafından doğrudan yordanmaktadır. Bilişsel yeniden değerlendirme ve gözlemlene ile duygu düzenleme güçlükleri arasında doğrudan bir ilişki bulunmamıştır.

Dolaylı etkilerde ise, merkezsizleştirmenin, bilinçli farkındalığın dört boyutu ile psikolojik sıkıntı arasındaki ilişkide duygu düzenleme güçlüklerinin istatistiksel olarak anlamlı bir aracı değişkeni olduğu görülmüştür. Buna göre, psikolojik sıkıntı ile merkezsizleştirme ( $\beta = -.20, p < .01$ ), tanımlama ( $\beta = -.05, p < .05$ ), içsel deneyimleri yargılamama ( $\beta = -.11, p < .01$ ) ve içsel deneyimlere tepkisizlik ( $\beta = -.08, p < .05$ ) arasında duygu düzenleme güçlüklerinin aracı rolü ile dolaylı ve anlamlı ilişkiler bulunmaktadır. Duygu düzenleme güçlüklerinin aracı rolü ile farkındalıkla davranma ve psikolojik sıkıntı arasında da dolaylı ve anlamlı bir ilişki bulunmaktadır ( $\beta = -.14, p < .01$ ). Psikolojik sıkıntı ile gözlemlene ve bilişsel yeniden değerlendirme arasında

duygu düzenleme güçlüklerinin aracı rolü ile anlamlı dolaylı bir ilişki bulunmamıştır.

Bilinçli farkındalığın beş boyutu, merkezsizleştirme ve bilişsel yeniden değerlendirme duygu düzenleme güçlüklerini %66 varyans ile açıklarken, bilinçli farkındalığın beş boyutu, merkezsizleştirme ve bilişsel yeniden değerlendirme, psikolojik sıkıntıyı duygu düzenleme güçlükleri aracı rolü ile tüm model psikolojik sıkıntıya ilişkin toplam varyansın % 57'sini açıklamaktadır.

#### **4. TARTIŞMA**

Duygu Düzenleme Terapisi (Mennin ve Fresco, 2009) kuramsal çerçevesi kapsamında çalışmanın amacı, üniversite öğrencilerinde bilinçli farkındalık, merkezsizleştirme, bilişsel yeniden değerlendirme ile psikolojik sıkıntı arasındaki ilişkide duygu düzenleme güçlükleri dolaylı etkisini incelemektir. Bu amaç doğrultusunda öncelikle gerçekleştirilen pilot çalışma ile Yaşantılar Ölçeği (Fresco vd., 2007) Türkçe'ye uyarlanmıştır. Sonuçlar, Yaşantılar Ölçeği–Merkezsizleştirme boyutunun psikometrik açıdan Türkiye’de üniversite örnekleminde orijinal çalışmada (Fresco vd., 2007) ve İspanyolca’ya uyarlama çalışmasında (Soler vd., 2014) elde edilen bulgularla benzer olduğu görülmüştür. Aynı zamanda ana veri seti ile yapılan korelasyon analiz sonuçları Yaşantılar Ölçeği - Merkezsizleştirme ile duygusal sıkıntı arasında negatif ve bilişsel yeniden değerlendirme, tanımlama, farkındalıkla davranma, içsel deneyimleri yargılamama ve içsel deneyimlere tepkisizlik ile pozitif yönde bir ilişki olduğunu göstermiştir. Bu bulgular, merkezsizleştirme ile depresyon ve kaygı belirtileri arasında negatif ve bilişsel yeniden değerlendirme ile pozitif yönde ilişki olduğunu gösteren Fresco vd. (2007) tarafından gerçekleştirilen çalışma ile tutarlıdır. Sole vd. (2014) tarafından gerçekleştirilen ve merkezsizleştirme ile psikolojik sıkıntı arasında negatif ve bilinçli farkındalığın boyutları ile pozitif ilişki gösteren çalışma ile benzerlik



göstermektedir. Bu bulgular, ölçeğin yakınsak ve ıraksak geçerliği hakkında bilgi vermektedir. Özetle, Yaşantılar Ölçeği - Merkezsizleştirme Türkçe formu bu çalışmanın örneklem grubunda geçerli ve güvenilirlerdir.

Tüm modelin uyum indekslerine bakıldığında, Duygu Düzenleme Terapisi kuramsal çerçevesine göre test edilen modelin veriye uyum sağladığı ve uyum iyiliği indekslerinin kabul edilebilir düzeyde olduğu görülmüştür. Bu bulgular, Duygu Düzenleme Terapisi (Mennin ve Fresco, 2009) tarafından sunulan model için ampirik bir kanıt sunmaktadır. Genel olarak model değerlendirildiğinde varsayımların büyük çoğunluğunun desteklendiği görülmektedir.

Çalışmada ayrıca duygu düzenleme güçlüklerinin psikolojik sıkıntı üzerinde kilit bir role sahip olduğu varsayılmıştır. Bu varsayımı destekler şekilde, duygu düzenleme güçlüklerinin merkezsizleştirme, bilinçli farkındalığın dört boyutu ile psikolojik sıkıntı arasındaki ilişkide istatistiksel olarak anlamlı bir aracı değişken olduğu görülmüştür. Aynı zamanda duygu düzenleme güçlükleri psikolojik sıkıntıyı güçlü bir şekilde yordamaktadır. Bu bulgular alan yazın tarafından da desteklenmektedir (örn., Bardeen vd., 2012; Pepping vd., 2012; Ritschel vd., 2015). Bu çalışmanın sonuçlarına göre merkezsizleştirme ve bilinçli farkındalığın dört boyutu, duygu düzenleme güçlüklerini anlamlı şekilde doğrudan yordamaktadır. Merkezsizleştirme ile duygu düzenleme güçlükleri arasındaki doğrudan ilişki Lafferty (2013) tarafından gerçekleştirilen çalışma ile benzerlik göstermektedir. Bilinçli farkındalık ve duygu düzenleme güçlükleri arasındaki ilişki de alan yazın ile tutarlılık göstermektedir (Baer vd., 2006; Coffey ve Hartman, 2008).

Sonuçlar bağımsız değişkenler açısından incelendiğinde, gözlemlenebilir, bilinçli farkındalığın önemli bir parçası olarak ele alınmaktadır (örn., Baer vd., 2009; Kabat-Zinn, 1990) ve çalışmalar bilinçli farkındalığın psikolojik sıkıntı üzerindeki olumlu etkisini desteklemektedir (örn., Masuda ve Tully, 2012;

Ülev, 2014). Bu doğrultuda, gözlemlenmenin hem psikolojik sıkıntı hem de duygu düzenleme güçlükleri ile negatif bir ilişkisi olduğu varsayılmış; ancak beklenenin aksine bilinçli farkındalığın gözlemlene boyutu ile psikolojik sıkıntı arasında pozitif doğrudan bir ilişki bulunmuş ve duygu düzenleme güçlükleri ile arasında ilişki bulunmamıştır. Bu bulgular, alan yazının gözlemlenmenin rolü ile ilgili bahsedilen bilgilerle tutarsızlık gösterse de meditasyon yapmayan örneklemle gerçekleştirilen çalışmalarda gözlemlene ile psikolojik sıkıntı arasında ya pozitif (Baer vd., 2006; Harnett vd., 2016) ya da anlamsız ilişki bulunmuştur (Baer vd., 2004; Bowlin ve Baer, 2012; Pearson, Brown, Bravo ve Witkiewitz, 2015). Baer ve diğerlerine (2008) göre bilinçli farkındalığın gözlemlene boyutu, meditasyon yapan kişilerde psikolojik iyi oluşu etkileyen önemli bir faktör olsa da yalnızca meditasyon yapmayan kişiler için bu durum değişebilmektedir. Meditasyon yapan katılımcılarla, meditasyon yapmayan katılımcılar için bilinçli farkındalık boyutlarını kıyaslayan çalışmalar da bunu desteklemektedir (Baer vd., 2008; Williams, Dalgleish, Karl ve Kuyken, 2014). Baer ve diğerleri (2008)'e göre meditasyon yapmayan kişiler içsel ve dışsal deneyimlerini fark ederken olumsuz uyarıcılara daha çok odaklanmaktadır ve meditasyon yapan kişiler deneyimlerini daha yargısızca gözlemleyebilmektedirler.

Modelde bilinçli farkındalığın farkındalıkla davranma boyutu incelendiğinde, hem duygu düzenleme güçlükleri hem de psikolojik sıkıntı ile doğrudan ve negatif yönde ilişkili olduğu, aynı zamanda duygu düzenleme güçlükleri aracı etkisiyle psikolojik sıkıntı ile dolaylı ve negatif yönde ilişkili olduğu bulunmuştur. Bulgular alan yazın ile tutarlılık göstermektedir (Bowlin ve Baer, 2012; Harnett vd., 2016; Pearson vd., 2015; Slonim vd., 2015). Ancak bu çalışma bilinçli farkındalığın, farkındalıkla davranma boyutunun duygu düzenleme güçlükleri aracı etkisi ile de psikolojik sıkıntı üzerinde etkili olduğunu göstermiştir. Buna göre, farkındalıkla davranmaya daha eğilimli olan kişiler daha az psikolojik sıkıntı yaşamakta ve aynı zamanda daha az duygu düzenleme güçlükleri yaşamaktadırlar.

Bilinçli farkındalığın diğer boyutlarına (tanımlama, içsel deneyimleri yargılamama ve içsel deneyimlere tepkisizlik) bakıldığında, boyutların psikolojik sıkıntı ile ilişkili oldukları; ancak bu ilişkinin doğrudan değil tam aracı rolü etkisi ile duygu düzenleme güçlükleri üzerinden olduğu görülmüştür. Bu bulgular alan yazın tarafından da desteklenmektedir (örn., Baer vd., 2006; Bowlin ve Baer, 2012; Harnelt vd., 2016; Pearson vd., 2015; Slonim vd., 2015). Ancak bu çalışma söz konusu ilişkinin doğrudan değil, dolaylı bir ilişki olduğunu göstermektedir. Bilinçli farkındalığın boyutlarının psikolojik sıkıntı ile ilişkisini duygu düzenleme güçlükleri aracı rolü ile inceleyen çalışmaların sınırlı olmasından dolayı diğer çalışmalarla kıyaslama yapılamamıştır. Bu çalışmanın sonucuna göre tanımlama, içsel deneyimleri yargılamama ve içsel deneyimlere tepkisizlik, duygu düzenleme güçlüklerini azaltmada etkili oldukları zaman psikolojik sıkıntı üzerinde de olumlu etki oluşturmaktadır.

Merkezsizleştirme ise duygu düzenleme güçlükleri ile doğrudan negatif yönde ilişkili bulunmuştur. Bu bulgu Lafferty (2013) tarafından gerçekleştirilen çalışma ile tutarlılık göstermektedir. Merkezsizleştirme ile psikolojik sıkıntı arasında doğrudan ilişki anlamsız iken, duygu düzenleme güçlükleri aracı rolü ile negatif yönde ve anlamlı bulunmuştur. Merkezsizleştirme ile psikolojik sıkıntı arasından negatif bir ilişki olduğunu gösteren çalışmalar bulunmaktadır (örn., Morgan vd., 2015); ancak bu çalışma söz konusu ilişkinin merkezsizleştirme ile duygu düzenleme güçlükleri arasındaki ilişkiden kaynaklandığına işaret etmektedir.

Duygu Düzenleme Terapisi (Mennin ve Fresco, 2009) kuramsal çerçevesi temelinde oluşturulan model ile uyumsuz olarak bilişsel yeniden değerlendirme, hem duygu düzenleme güçlükleri hem de psikolojik sıkıntı ile anlamlı olarak ilişkili bulunmamıştır. Önceki çalışmalar da bu bulgular ile tutarlılık göstermemektedir (örn., Beath vd., 2015; Garnefski vd., 2001). Ancak, psikolojik iyi oluşu sağlayabilmek için önemli olan noktanın

düşüncelerin içeriğini değiştirmek olmadığı, asıl önemli olanın düşüncelerle olan ilişkinin değiştirilmesi gerektiğini savunan araştırmacılar da bulunmaktadır (Hayes ve Feldman, 2004; Corcoran vd., 2010).

#### **4.1 Uygulamaya Yönelik Öneriler**

Bu araştırmada psikolojik sıkıntı üzerinde etkili olabilecek değişkenler incelenmiştir. Duygu Düzenleme Terapisi kuramsal çerçevesi temelinde oluşturulan modelin bu çalışma ile desteklenmesine dayanarak bu yaklaşımın Türkiye’de üniversite öğrencilerinde uygulanabilir olduğu düşünülmektedir.

Çalışmanın bulguları; merkezsizleştirme ve bilinçli farkındalığın boyutlarından tanımlama, farkındalıkla davranma, içsel deneyimleri yargılamama ve içsel deneyimlere tepkisizlik becerilerinin psikolojik sıkıntı ile ilişkisinde duygu düzenlemenin anahtar rolünü desteklemektedir. Bu nedenle, üniversite öğrencilerinde psikolojik sıkıntıyı önleme ya da müdahale çalışmalarında öğrencilerin duygu düzenleme becerilerini arttırmaya öncelik verilmelidir.

Çalışma kapsamında ele alınan merkezsizleştirme ve bilinçli farkındalığın boyutlarından tanımlama, farkındalıkla davranma, içsel deneyimleri yargılamama ve içsel deneyimlere tepkisizlik becerilerinin psikolojik sıkıntıyı azaltmayla ilişkili olduğu bulunmuştur. Buradan hareketle, var olan müdahale ve önleme modelleri bu beceriler bağlamında tekrar gözden geçirilip değiştirilebilir ya da yeni modeller geliştirilebilir.

Çalışmada bilinçli farkındalığın gözlemlene boyutu ile psikolojik sıkıntı arasında pozitif bir ilişki bulunmuştur. Gözlemlene becerisi kişilere kazandırılırken olumsuz bir etki yaratmamasına özen gösterilmelidir. Desrosiersa, Klemanskib ve Nolen-Hoeksema (2013) ve Baer vd. (2008) tarafından önerildiği gibi gözlemlene becerisi üzerinde durulurken içsel ve dışsal deneyimleri yargılamaksızın gözlemlenmeye vurgu yapılmalıdır. Son

olarak, çalışma kapsamında Türkçe'ye uyarlanan Yaşantılar Ölçeği, Farkındalık Temelli Bilişsel Terapi (Teasdale vd., 1995) ve Duygu Düzenleme Terapisi (Mennin ve Fresco, 2009) gibi merkezsizleştirme becerisini temel alan terapilerin etkililiğini değerlendirmek için uygulayıcılar ve araştırmalar tarafından kullanılabilir.

#### **4.2 Gelecek Çalışmalar için Öneriler**

Bu araştırma ilişkisel bir çalışma olması nedeniyle nedensel çıkarımlarda bulunma yönünde sınırlılığı bulunmaktadır. Gelecekte yapılacak çalışmalarda deneysel araştırma deseni kullanılarak Duygu Düzenleme Terapisi'nin bilinçli farkındalığın boyutları, merkezsizleştirme ve bilişsel yeniden değerlendirme becerileri, duygu düzenleme güçlükleri ve duygusal sıkıntı üzerindeki etkisi değerlendirilebilir.

Duygu Düzenleme Terapisi (Mennin ve Fresco, 2009) tarafından psikolojik sıkıntı üzerinde etkili olabilecek üç mekanizmadan sadece duygu düzenleme mekanizması incelenmiştir. Motivasyon ve bağlamsal öğrenme mekanizmaları gibi duygusal sıkıntıyı etkileyebilecek diğer değişkenler ilerideki çalışmalarda incelenebilir.

Çalışmada önceki çalışmalarla benzer şekilde, bilinçli farkındalığın boyutlarının duygu düzenleme güçlükleri ve duygusal sıkıntı üzerinde farklı etkilerinin olduğu görülmüştür (Baer vd., 2006; Baer, Walsh ve Lykins, 2009; Höfling vd., 2011; Gecht vd., 2014). Bu nedenle, bilinçli farkındalığın boyutlarının çalışılan değişkenler üzerindeki etkilerinin daha iyi anlaşılması için gelecekte yapılacak çalışmalarda boyutların ayrı ayrı ele alınması önerilmektedir.

Çalışmada merkezsizleştirme ve bilinçli farkındalığın boyutlarından tanımlama, farkındalıkla davranma, içsel deneyimleri yargılamama ve içsel

deneyimlere tepkisizlik becerilerinin hem duygu düzenleme güçlüklerini açıklamada (%66) hem de tüm önerilen modelin psikolojik sıkıntıyı açıklamada (%57) oldukça iyi düzeyde olduğu görülmektedir. Buradan hareketle, bu becerileri kapsayan beceri temelli önleyici programlar geliştirilmesi ve bunların etkililiğinin test edilmesi önerilebilir.

Bu araştırmanın örnekleminin büyük bir çoğunluğu kadın ve eğitim fakültesinde okuyan üniversite öğrencilerinden oluşmaktadır. Bu nedenle, üniversite öğrencilerini daha iyi temsil eden bir örneklem ile çalışmalar yürütülebilir. Son olarak, bu araştırma Ankara’da bir devlet üniversitesinden veri toplanarak gerçekleştirilmiştir. Bu nedenle, gelecekteki çalışmalarda psikolojik sıkıntı ile ilgili sunulan model farklı üniversitelerde okuyan öğrencilerden veri toplanarak gerçekleştirilebilir.

## M: Tez Fotokopisi İzin Formu

### ENSTİTÜ

Fen Bilimleri Enstitüsü	<input type="checkbox"/>
Sosyal Bilimler Enstitüsü	<input checked="" type="checkbox"/>
Uygulamalı Matematik Enstitüsü	<input type="checkbox"/>
Enformatik Enstitüsü	<input type="checkbox"/>
Deniz Bilimleri Enstitüsü	<input type="checkbox"/>

### YAZARIN

Soyadı : Ünlü Kaynakçı

Adı : Fatma Zehra

Bölümü : Psikolojik Danışma ve Rehberlik

**TEZİN ADI** (İngilizce) : A MODEL FOR PSYCHOLOGICAL DISTRESS AMONG UNIVERSITY STUDENTS: MINDFULNESS, DECENTERING, REFRAMING, AND INDIRECT EFFECT OF EMOTION REGULATION DIFFICULTIES

**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:**