RUMINATIVE PROCESSES AS A UNIFYING FUNCTION OF DYSREGULATED BEHAVIORS: AN EXPLORATION OF THE EMOTIONAL CASCADES

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ABSTRACT

RUMINATIVE PROCESSES AS A UNIFYING FUNCTION OF DYSREGULATED BEHAVIORS:
AN EXPLORATION OF THE EMOTIONAL CASCADES

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The aim of the present study was to investigate the link between ruminative processes and dysregulated behaviors. Accordingly, the emotional cascade model (Selby et al., 2008; 2009) was tested in a sample of Turkish university students using structural equation modeling. The emotional cascade model posits that the link between emotional and behavioral dysregulation may be through emotional cascades, which are repetitive cycles of rumination and negative affect that result in an increased attention paid to the emotional stimuli and intensification of emotional distress. Dysregulated behaviors, such as non-suicidal self-injury, are used in order to break this cycle and distract the person from ruminative processes.

In the first part of the study, a common measure of cognitive emotion regulation, namely The Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski et al., 2001) was adapted into Turkish and its psychometric properties were investigated. Results suggested that the Turkish version of the CERQ is a reliable

and valid meausure of cognitive coping. Next, a structural equation model was tested to assess the relationship between emotional cascades (as indicated by rumination, thought suppression, catastrophizing) and behavioral dysregulation (as indicated by binge eating, non-suicidal self-injury, excessive reassurance-seeking, and drinking to cope). The results showed that the emotional cascades are associated to behavioral dysregulation. This relationship, however, did not remain significant when the effect of current psychological distress on behavioral dysregulation was controlled for. The importance and possible implications of the present study was discussed.

Keywords: emotional cascade model, rumination, emotion dysregulation, behavioral dysregulation.

ÖZ

RUMİNATİF SÜREÇLERİN DÜZENLENEMEYEN DAVRANIŞLAR ÜZERİNDEKİ ETKİSİ: DUYGUSAL ÇAĞLAYAN MODELİNİN TESTİ

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Bu çalışmanın amacı ruminatif süreçler ve düzenlenemeyen dürtüsel davranışlar arasındaki ilişkiyi araştırmaktır. Bu amaçla, duygusal çağlayan modeli (Selby ve ark., 2008; 2009) bir grup Türk üniversite öğrencisinden oluşan örneklem üzerinde yapısal eşitlik modeli kullanılarak test edilmiştir. Duygusal çağlayan modeline göre duygu düzenleyememe ve düzenlenemeyen davranışlar arasındaki bağlantı ruminatif süreçler ile açıklanabilir. Duygusal çağlayanlar, ruminasyon ve negatif duygudurumun birbirini besleyerek oluşturdukları ve duygusal sıkıntıyı arttıran döngülerdir. Kendine zarar verme gibi düzenlenemeyen dürtüsel davranışlar bu döngüye giren bireyin dikkatini başka yöne çevirmek ve ruminatif süreci kırmak için kullanılır.

Çalışmanın ilk kısmında, bilişsel duygu düzenleme yöntemlerini ölçmede kullanılan Bilişsel Duygu Düzenleme Ölçeği (The Cognitive Emotion Regulation Questionnaire; Garnefski et al., 2001) Türkçe'ye çevrilmiş ve psikometrik özellikleri incelenmiştir. Buna göre ölçeğin Türkçe formunun bilişsel baş etme

yöntemlerini ölçmede güvenilir ve geçerli olduğu saptanmıştır. İkinci kısımda ise duygusal çağlayanlar (ruminasyon, felaketleştirme, düşünce bastırma) ve düzenlenemeyen davranışlar (kendine zarar verme, bulimia semptomları, aşırı onay isteme, baş etmek için içme) arasındaki ilişki yapısal eşitlik modeli ile test edilmiştir. Sonuç olarak duygusal çağlayanlar ve düzenlenemeyen davranışlar arasında anlamlı bir ilişki bulunmuştur. Fakat bu ilişki anksiyete ve depresyon semptomlarının düzenlenemeyen davranışlara olan etkisi kontrol edildiğinde istatistiksel olarak anlamlı bulunmamıştır.

Anahtar sözcükler*:* duygu düzenleme, bilişsel duygu düzenleme, duygusal çağlayan modeli.

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CHAPTER 1

INTRODUCTION

"Should I kill myself, or have a cup of coffee?"

— Albert Camus

People have different ways of managing their negative emotions. Some get relief from taking a walk or talking to a friend; whereas some rely on eating, drinking or engaging in self-injurious behaviors to regulate their distressing emotions. But how do some people need maladaptive behaviors to cope with difficult emotions, while others can manage them in more adaptive ways?

In this study, the development of dysregulated behaviors were suggested to be associated with maladaptive emotional regulation tendencies. More specifically, the unifying role of ruminative processes on behavioral dysregulation was tested within the theoretical framework of emotional cascade model (Selby, Anestis, & Joiner, 2008; Selby, Anestis, Bender, & Joiner, 2009; Selby & Joiner, 2009). In the first part of the study, Cognitive Emotion Regulation Questionnaire (Garnefski, Kraaij, & Spinhoven, 2001) was adapted into Turkish. Next, emotional cascade model was tested using structural equation modeling in a sample of Turkish university students.

1.1. Emotion Regulation and Dysregulation

Controlling our anger in traffic, managing our anxiety before an exam, suppressing our laughter in a formal meeting…All of these examples show how important regulating our emotions is in everyday life. The fact is, emotion

regulation plays a crucial role in modern society; and adaptive emotion regulation is a must for a healthy functioning (Gross, Richards, & John, 2006).

Emotion regulation theories have gained attention in both developmental and adult psychology literature since 1980s (Gross, 1999). Lacking a single definition, emotion regulation has been defined by Thompson (1994) as the "extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals" (p. 27). In short, emotion regulation is how we change different aspects of an emotion, such as its intensity, onset, or duration. A simple example is a person with obsessive compulsive disorder who feels intense anxiety about contamination, and washes his/her hands repeatedly to decrease his/her anxiety.

According to Gross (1998, 2002), emotion regulation strategies can be divided into two broad categories; which are *antecedent-focused* and *response-focused* emotion regulation strategies. *Antecedent-focused* strategies are the things we do before an emotion is created and before it has changed our physiology and behavior; such as seeing a social gathering as an opportunity to meet new people. *Response-focused* strategies, on the other hand, are implemented after emotional response is activated; such as going to the social gathering and trying to hide our anxiety by smiling. Based on this account, it can be stated that emotion regulation can either be cognitive (e.g., reappraisal) or behavioral (e.g., smiling).

Emotion regulation is suggested to be a developmental process; in other words regulatory skills are not present at birth and are acquired through sensory, neurological, motor, and language development, as well as social interaction with the caregivers (Dodge & Garber, 1991). According to Cichetti, Ackerman, and Izard (1995) mechanisms that regulate neural, affective, cognitive and sensorimotor stimuli in the system of emotions develop in this process. In early childhood, emotional responses are disorganized and unpredictable; whereas in middle childhood and later on, emotional behavior becomes more integrated and

predictable (Cichetti et al., 1995). During the first months of an infant, for example, caregivers directly manage an infant's emotional reactions by behaviors such as feeding or soothing its distress (Thompson & Goodman, 2009). As the child gets older, more complex and advanced forms of emotion regulation strategies are acted out to achieve personal goals and to fit in social situations (Thompson & Goodman, 2009). Because emotion regulation is an acquired process; failures, which can be called *dysregulation*, are quite possible (Dodge & Garber, 1991).

Disturbances related to emotion dysregulation are very common in psychological disorders, such that emotion regulation difficulties take place in diagnostic criteria for numerous clinical disorders. For example, one of the Diagnostic and Statistical Manual of Mental Disorders (4^{th} ed.) criteria for *generalized anxiety disorder* (i.e., "The person finds it difficult to control worry") directly refers to a difficulty in regulating emotions. Similar referrals exist for disorders such as *borderline personality disorder*, *post-traumatic stress disorder*, and many others. Although commonly referred to, the concept of emotion regulation, as well as differentiating regulation from *dysregulation* still seems to be problematic. According to Cicchetti (1995), emotion dysregulation is different from problems in emotion regulation, and it requires an already existing emotion regulation system which operates inappropriately or maladaptively. On the other hand, Mennin and colleagues developed a model of emotion dysregulation for anxiety and mood disorders (Mennin, Holaway, Fresco, Moore, & Heimberg, 2007), and argued that emotion dysregulation has four components; which are heightened intensity of emotions, poor understanding of emotions, negative reactivity to one's emotional state, and maladaptive emotional management responses. Although there are various opinions on the definition of emotion dysregulation, the concept seems to involve both deficits in emotion regulation processes, and maladaptive application of otherwise adaptive strategies (Kring & Werner, 2004).

1.2. Behavioral Dysregulation

Emotion regulatory processes have been a potential unifying mechanism for numerous clinical disorders (Gross & Munoz, 1995). Emotion dysregulation theories have been used to explain various psychological problems in both child and adult psychopathology (Weinberg & Klonsky, 2009); including depression (e.g., Beck, Rush, Shaw, & Emery, 1979), eating disorders (e.g., Fairburn, Norman, Welch, O'Connor, Doll et al., 1995), borderline personality disorder (e.g., Linehan, 1993), and generalized anxiety disorder (e.g., Mennin, Heimberg, Turk, & Fresco, 2005). The literature did also suggest that impulsive and dysfunctional behaviors such as non-suicidal self-injury (NSSI) are used to alleviate negative, painful, and uncontrollable emotions (Linehan, 1993).

Evidence has shown that various impulsive behaviors such as NSSI and binge eating are related to the difficulties in regulating emotions (e.g., Hayaki, 2009; Gratz & Roemer, 2008; Linehan, 1993). These behaviors do also seem to have emotion regulatory properties and function as a means of down-regulating negative affect (e.g., Heatherton & Baumeister, 1991; Cooper, Frone, Russel, & Mudar, 1995; Klonsky, 2009). These impulsive and dysfunctional behaviors, which we can call "dysregulated behaviors" (Selby & Joiner, 2009) such as drinking, non-suicidal self injury, binge eating and excessive reassurance-seeking, have been associated with emotion regulation deficits and are argued to function as regulatory strategies by distracting attention from or alleviating distressing emotions (e.g., Klonksky, 2009; Linehan, 1993).

One of the most widely studied behaviors that have been associated with emotion dysregulation and coping motives is drinking. There is now substantial evidence that an attempt to regulate negative emotions is an important motivation behind alcohol consumption (Cooper et al., 1995). Drinking to cope, defined as using alcohol to escape, avoid or cope with negative emotional experience was linked to heavy drinking and alcohol related problems in numerous studies (e.g.

Kuntsche, Knibbe, Gmel, & Engels, 2005; Hollahan, Moos, Hollahan, Cronkite, & Randall, 2001).

In their motivational model of alcohol use, Cooper and colleagues (1995) stated that drinking to cope is initiated by negative emotion and is used as a coping strategy when other more adaptive strategies are not available. This strategic consumption of alcohol is particularly used to escape, avoid or regulate distressing emotions. Consistent with this proposition, Swendson, Carney, Tennen, Affleck, Willard, and Hromi (2000) showed that daily experience of nervousness increases later alcohol consumption, indicating that people consume alcohol to self-mediate after anxious mood.

A second example behavior that is used for affect regulation is non-suicidal self-injury (NSSI); referred as the intentional, direct damage to one's own body without suicidal intent (Gratz, 2001). It has been widely accepted that one of the most important factors that initiate and maintain NSSI is emotion dysregulation (Gratz, 2003, 2007; Linehan, 1993). Although there are several reported reasons for engaging in NSSI (Klonsky, 2009), the most frequently reported one is reducing or ending negative feelings (Klonksky, 2009; Chapman, Gratz, & Brown, 2006). Specifically, the literature suggests that NSSI functions as a form of emotional avoidance, and is used to escape, avoid or change painful emotions (Gratz, 2003). Supporting this view, Leibenluft and colleagues (1987) found that that individuals report relief from anxiety and similar negative affective states after cutting themselves.

Affect regulating functions have also been associated with binge eating and bulimic pathology (Whiteside, Chan, Neighbors, Hunter, Lo, & Larimer, 2007; Fairburn, Cooper, & Shafran, 2003). Research suggests that emotion dysregulation or difficulties in the expression and modulation of emotion may play an important role in the etiology and maintenance of bulimia nervosa (Hayaki, 2009). Instead of accepting changes in mood and dealing appropriately with them, these patients engage in "dysfunctional mood modulatory behavior"

such as binge eating (Fairburn et al., 2003). These behaviors reduce their awareness of the negative mood states, neutralize them; but also contribute to the maintenance of the problem. Similarly, in their escape theory of binge eating, Heatherton and Baumeister (1991) proposed that an individual who engages in binge eating do so in order to decrease negative emotions associated with self-awareness. Focusing on eating related stimuli narrows their attention to present physical cues and helps them to avoid aversive feelings. Supporting this view of binge eating, a substantial number of studies (e.g., Fairburn et al., 1995; 2003) indicated that binge eaters have difficulty in regulating negative emotions, eat in order to regulate these unwanted emotions, and to cope with the psychological distress.

Lastly, excessive reassurance-seeking, defined as excessively asking assurances from others to reduce doubts about one's self-worth and lovability (Joiner, Metalzky, Katz, & Beach, 1999), does also appear to be an emotion regulation strategy (Selby et al., 2008). According to Coyne's interpersonal theory of depression (1976; cited in Weinstock & Whisman, 2007), other people's reassurance does not alleviate the doubts of the reassurance-seeking individual; because he or she does not believe in its sincerity. Thus, the individual seeks for feedback repetitively. This need for seeking feedback is very strong and the emotion is very dominant; so this pattern of reassurance-seeking and doubt is repetitive and difficult to change. Research shows that excessive reassurance-seeking is a contributor to depressive symptoms and is involved in negative interpersonal outcomes such as social rejection (Joiner et al., 1999; Joiner & Metalsky, 2001).

Affect regulatory functions of behavioral dysregulation have been emphasized by various theories. Conceptualization of dysregulated behaviors as emotion regulation strategies has been articulated most comprehensively (Gratz & Roemer, 2003) by Linehan (1993)'s theory of *borderline personality disorder* (BPD). Linehan (1993) posited that emotion dysregulation is the core feature of BPD, which results in the development of dysregulated behaviors such as NSSI to

regulate negative emotions. The argument is that emotion dysregulation is both the problem the individual needs to solve and the source of other problems. Impulsive borderline behaviors, such as overdosing or cutting, either result from the attempts to regulate intense emotion or the outcome of emotion dysregulation (Linehan, 1993).

A similar conceptualization of dysregulated behaviors was used by the escape theory (Heatherton & Baumeister, 1991). Escape theory argued that people with high levels of self-awareness engage in immediate actions, such as binge eating, in order to shift their attention to the present intense sensations and escape from negative emotions resulting from their heightened focus on the self. Alcohol use, binge eating, smoking, sexual masochism and suicidal behavior are all suggested examples of escape behaviors from highly aversive self-view and self-awareness (Heatherton &Baumeister, 1991).

Similarly, a recent theory of behavior dysregulation, the experiential avoidance model of NSSI (Chapman et al., 2006), is based on the hypothesis that NSSI functions as a negative reinforcer that is used to decrease or end unwanted negative emotions. Experiential avoidance has been defined as a process in which the person avoids remaining in contact with a particular experience such as an emotion or a physical sensation, and tries to change frequency or characteristics of these events (Hayes, Wilson, Gifford, Follette, & Strohsal, 1996). Hayes and his colleagues (1996) argue that many forms of psychopathology can be explained as dysfunctional attempts of experiential avoidance. According to the experiential avoidance model of NSSI (Chapman et al., 2006), NSSI functions as avoidance and escape from aversive emotional experiences and is maintained by a process of escape conditioning and negative reinforcement.

All of these models give important insights into the development and function of dysregulated behaviors. The common view is that people engage in dysregulated behaviors to escape, avoid or regulate negative private experiences. However, there still exists a gap in the explanation of the link between emotional

and behavioral dysregulation. For example, these models do not articulate why adaptive behaviors such as taking a shower fail to reduce negative affect in some people or why each experience of negative affect do not end up with dysfunctional behaviors (Selby et al., 2009).

1.3. Cognitive Emotion Regulation and Dysregulated Behaviors

As previously discussed, during the last decades researchers have linked various psychological disorders and maladaptive behaviors to the deficits in adaptive emotion regulation. Particularly the use of certain cognitive emotion regulation strategies such as rumination (e.g., Garnefski et al., 2001), catastrophizing (e.g., Martin & Dahlen, 2005), and thought suppression (e.g., Lavender, Jardin, & Anderson, 2009) have been associated with negative psychological outcomes, including dysregulated behaviors. These findings suggest that one potential link between emotion dysregulation and dysregulated behaviors may lay in the cognitive emotion regulation strategies people use in order to make meaning of and cope with emotional experiences.

Rumination is one of the most studied and well-known of cognitive emotion regulation strategies. Rumination has been defined as a response to psychological distress that involves repetitive focusing of one's attention to the negative emotional state in an attempt to understand the feelings and thoughts surrounding the situation (Nolen-Hoeksema, 1991). Examples include thinking about how sad, hopeless, and alone a person feels (e.g., "I just can't cope with it") or trying to find a cause for the negative feelings (e.g., "Why am I feeling so low?). At the first stance, these thoughts seem like an attempt to understand the meaning and consequences of an experience. However, the characteristic of rumination is an intense focus on the negative state (Nolen-Hoeksema, 1991); and if persistent, rumination may prevent taking action or distracting oneself from negative mood (Lyubomirsky & Tkach, 2003).

Numerous studies have shown that rumination about negative mood and other depressive symptoms increases the intensity and duration of negative affect,

results in longer periods of depression, impairs problem solving, prevents taking action, and decreases social support (Nolen-Hoeksema, 1991; Nolen-Hoeksema, Wisco, & Lyubomirsky, 2008; Lyubomirsky & Tkach, 2003). Although studies on rumination initially focused on its relationship with depression (Nolen-Hoeksema et al., 2008), it has also been connected to other maladaptive behaviors such as binge eating (Nolen-Hoeksema et al., 2007), NSSI (Hilt, Cha, & Nolen-Hoeksema, 2008), excessive reassurance-seeking (Weinstock & Whisman, 2006), and alcohol abuse (Nolen-Hoeksema & Harrel, 2002; Caselli, Ferretti, Leoni, Rebecchi et al., 2010) in both cross-sectional and prospective studies. More specifically, it has been shown that people with a higher tendency to ruminate also report engaging in more maladaptive behaviors compared to non-ruminators. Based on these findings researchers suggested that people who engage in avoidance coping and "escapist behaviors" like NSSI may do so in order to quiet their self-directed, ruminative thoughts (Nolen-Hoeksema et al., 2008).

Defined as consciously avoiding unwanted thoughts, thought suppression is another cognitive strategy that has been linked to various clinical disorders (Wenzlaff & Wegner, 2000). Studies on thought suppression revealed that suppressing unwanted thoughts can ironically recall these thoughts in a more frequent and intense way (Wegner, Schneider, Carter, & White, 1987), which results in a rebound effect (Abramowitz, Tolin, & Street, 2001). This rebound effect can also be behavioral. For instance, research showed that suppressing thoughts about food increases food consumption, especially for restraint eaters (Erskine & Georgiou, 2010).

Recent research suggested that thought suppression is linked to various psychological disorders and may play a role in psychopathology. For example, Rosenthal, Cheavens, Lejuez, and Lynch (2005) found that chronic thought suppression mediates the relationship between negative affectivity and borderline personality disorder symptoms. Furthermore, Najmi, Wegner, and Nock (2007) examined adolescents' self-reported tendency to suppress thoughts, and found that

thought suppression is related to the presence and frequency of non-suicidal self-injury which functions to reduce negative emotions.

Although they seem contrasting concepts, there is evidence linking thought suppression with rumination. Erber and Wegner (1996) posited that trying to suppress ruminative thoughts continuously cultivates further rumination, and raises rumination to pathological levels. Similarly, Wenzlaff and Luxton (2003) followed high versus low thought suppressors for 10-weeks, and found that after controlling for initial rumination and negative affect, at follow-up high suppressors reported higher levels of rumination and dysphoria after experiencing stress. So, we can assume that if a person ruminating on negative affect tries to suppress these unwanted thoughts, this may increase rumination on these thoughts, as well as increasing negative affect.

Catastrophizing is another cognitive emotion regulation strategy that is defined as the tendency to place exaggerated emphasis on the negative sides of an experience (Sullivan, Bishop, & Pivik, 1995; Garnefski & Spinhoven, 2001). Catastrophizing includes continually thinking about how terrible a negative event and its consequences are. Studies found that catastrophizing is associated with an increase in negative thoughts, emotional distress, and depression (Sullivan et al., 1995), and predicts future depression and anxiety symptoms in adults at one year follow-up (Garnefski & Kraaij, 2007). Researchers have suggested that catastrophizing is one of the ruminative processes, as it is continually thinking about negative consequences of an event, which amplifies negative affect (Selby & Joiner, 2009).

What these cognitive strategies we have discussed (i.e., rumination, thought suppression, and catastrophizing) have in common is that they all focus attention to negative stimuli, increasing negative affect as a product (Selby et al., 2008).

1.4. The Emotional Cascade Model

Even though a substantial amount of evidence indicates that emotion regulation deficits contribute to and maintain psychopathology, until recently there were no well-defined, integrative theories that explain the way in which maladaptive emotion regulation ends up to dysregulated behaviors. In an attempt to explain this link, recently proposed emotional cascade model (Selby et al., 2008, 2009; Selby & Joiner, 2009) argues that ruminative processes are the major source for the development of dysregulated behaviors.

The central claim of the emotional cascade model is that ruminative processes are the underlying cause of behavioral dysregulation. According to this account, the link between emotion regulation and behavioral dysregulation is through a process called an "emotional cascade" (Selby et al., 2008; Selby & Joiner, 2009; Selby et al., 2009). In an emotional cascade, people undergo a "positive feedback loop", in which rumination on negative thoughts and affect increases the intensity of the negative affect. The increase in negative affect then leads to an increased focus on the negative experience, which in turn results in more rumination; thus resulting in more negative affect. This cycle is repeated as the negative affect and rumination interacts, resulting in an intense experience where breaking this vicious cycle by using normal methods of distraction becomes ineffective. Here, dysregulated behaviors such as NSSI interfere with ruminative processes and shift the attention away from the ruminative thoughts to physical sensations such as pain (Selby & Joiner, 2009). Emotional cascade model has especially been used to understand patients with BPD, who suffer from intense emotional and behavioral dysregulation, such as parasuicidal behaviors (Linehan, 1993). However, the model can also be applied to other disorders that involve emotional and behavioral dysregulation.

1.5. General Aims of the Present Study

The emotional cascade model is a fairly new and promising model that offers a unifying ground for a variety of maladaptive behaviors. However, there

are only two published studies testing the model by now; so the evidence supporting the model is yet preliminary. Accordingly, the aim of the current study was to understand the emotion regulation processes that result in dysregulated behaviors (i.e., binge eating, NSSI, excessive reassurance-seeking, and alcohol use) within the theoretical framework of the emotional cascade model. Furthermore, we also expected to extend the empirical evidence demonstrating the link between rumination and various dysregulated behaviors.

To our knowledge, there are no measures in Turkish that specifically focus on the cognitive aspect of emotion regulation. Because rumination and catastrophizing, two cognitive emotion strategies, are hypothesized to be indicators of emotional cascades in the present study, a need for a standardized measure was arised to assess these constructs. Accordingly, the Cognitive Emotion Regulation Questionnaire (Garnefski et al., 2001) was translated into Turkish and its psychometric properties were analyzed in Study 1. Subsequently in Study 2, structural equation modeling was used to evaluate the relationship between emotional cascades (indicated by thought suppression, rumination, and catastrophizing) and dysregulated behaviors (i.e., non-suicidal self injury, bulimic symptoms, excessive reassurance-seeking, and drink to cope) in a sample of Turkish university students.

CHAPTER 2

STUDY I:
THE COGNITIVE EMOTION REGULATION QUESTIONNAIRE: FACTOR STRUCTURE AND PSYCHOMETRIC PROPERTIES OF THE TURKISH VERSION

The Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski et al., 2001) was developed to assess nine different cognitive emotion regulation strategies people use when they experience negative life events or situations. Although there are a number of measures that focus on how people regulate their emotions, the CERQ was the first scale that focused exclusively on the "cognitive" component of emotion regulation. The CERQ consistently demonstrated good psychometric properties across studies and has been increasingly used by researchers from different countries.

Existing evidence suggests that cognitive emotion regulation strategies assessed by the CERQ are strongly associated with psychological well-being in various age groups, in clinical and non-clinical samples, victim groups, and people with different medical conditions (e.g., Garnefski, Grol, Kraaij, & Hamming, 2008; Garnefski, Kraaij, Schroevers, Aarnink et al., 2009; Garnefski, Koopman, Kraaij, & ten Cate, 2009; Kraaij, Arensman, Garnefski, & Kremers, 2007; Kraaij, van der Veek, Garnefski, Schroevers, Witlox, & Maes, 2008; Schroevers, Kraaij, & Garnefski, 2008; Garnefski & Kraaij, 2006); invariant of gender (Garnefski, Teerds, Kraaij, Legerstee, & van den Kommer, 2004). The increased use of *self-blame*, *catastrophizing*, and *rumination* strategies has consistently been related to maladjustment (e.g., Kraaij, Garnefski, Schroevers, 2009). The use of cognitive strategies such as positive reappraisal, on the other

hand, was associated with psychological well-being in various studies (e.g., Garnefski et al., 2004). Although the authors' first conceptualization of cognitive strategies was twofold (i.e., more adaptive and less adaptive), not all of the later studies confirmed this categorization. Particularly, the findings regarding *acceptance* subscale were mixed. Although *acceptance* has generally been regarded as an adaptive strategy both empirically (e.g., Garnefski et al., 2001) and theoretically (e.g., Carver, Scheier, & Weintraub, 1989), some studies (e.g., Martin & Dahlen, 2005) showed that it may be associated with some psychological problems such as depression and stress. Thus, this initial categorization of the CERQ subscales is no more valid.

According to the relevant literature the CERQ is useful in measuring cognitive emotion regulation strategies and their relationship with emotional problems. For this reason, it was adapted into different languages such as French (Jermann, Van der Linden, d'Acremont, & Zermatten, 2006), Chinese (Zhu, Auerbach, Yao, Abela, Xiao, & Tong, 2008), German (Loch, Hiller, & Witthöft, 2011), Spanish (Domínguez-Sánchez, Lasa-Aristu, Amor, & Holgado-Tello, 2011), Hungarian (Miklósi, Martos, Kocsis-bogár, & PerczelForintos, 2011) and Persian (Abdi, Taban, & Ghaemian, 2012). However, the original 36-item form of the CERQ has not been adapted into Turkish. Except for the short form of the CERQ (Çakmak & Çevik, 2010), to our knowledge at present there are no measures in Turkish that focus on the *cognitive* aspect of emotion regulation. To address this limitation and to facilitate the investigation of cognitive coping strategies in Turkish population, the aim of the present study was to develop a Turkish version of the original CERQ, and to examine its factor structure and psychometric properties using a Turkish sample.

The hypotheses of the current study were:

1) As in the original form, the Turkish form of the CERQ will demonstrate a nine-factor structure;

2) The Turkish form will show good internal consistency and test-retest reliability values,

3) As an evidence for construct validity, *refocus on planning*, *positive reappraisal*, and *putting into perspective* will correlate positively with problem focused coping as measured by the Ways of Coping Inventory (Folkman & Lazarus, 1980); because all these scales reflect problem oriented, active management of a negative situation;

4) Again for construct validity; *positive refocusing*, *refocus on planning*, *positive reappraisal*, and *putting into perspective* will show positive correlations with scores on general self-efficacy; a theoretically relevant concept to more positive cognitive emotion regulation strategies (Garnefski et al., 2002). On the other hand, c*atastrophizing*, *self-blame*, *other-blame*, and *rumination* will not correlate or show negative correlations with self-efficacy scores;

5) As suggested by previous studies; *catastrophizing*, *self-blame*, *other-blame*, and *rumination* will show positive correlations with psychological symptoms; while *positive refocusing*, re*focus on planning*, *positive reappraisal*, and *putting into perspective* will not correlate or show negative correlations with psychological symptoms.

CHAPTER 3

METHOD OF THE STUDY I

3.1. Participants

At the Time 1 measurement the sample consisted of 396 Turkish university students (71.2% female, *n* = 282; 28.8% male, *n* = 114) with ages ranging between 18 and 47 (*M* = 22.55, *SD* = 3.28). In terms of perceived socioeconomic status (SES), 15.2 % (*n* = 60) of the initial sample rated themselves as belonging to low, 64.1% (*n* = 254) to middle, 18.4% (*n* = 73) to high, and 0.8% (*n* = 3) to very high SES. Of the initial sample, 260 students were asked to participate in the Time 2 measurement and 107 of them (79.4% female, *n* = 85; 20.6% male, *n* = 22) accepted to participate in the Time 2 assessment that took place a month later. Independent samples *t*-tests were conducted to compare responders with non-responders at Time 2 in terms of their age, SES, and levels of psychological symptoms at Time 1 as measured by Brief Symptom Inventory (Derogatis, 1993). The only significant difference was that responders were significantly older than (*m* = 23.25, *sd* = 4.21) than non-responders (*m* = 21.68, *sd* = 2.93), $t(256) = -3.51$, $p < .01$. Ages of the Time 2 sample ranged between 18 and 47 (mean age = 23.25, *sd* = 4.21); and of them 0.9% (*n* = 1) reported themselves as belonging to low, 75.7% (*n* = 81) to middle, and 20.6% (*n* = 22) to high SES.

3.2. Materials

Cognitive Emotion Regulation Questionnaire (CERQ). The CERQ (Garnefski et al., 2001) is a 36-item self-report questionnaire that assesses the use of nine cognitive emotion regulation strategies that people use after experiencing negative life events or situations. Each subscale consists of four items representing different emotion regulation strategies, namely *self-blame*,

acceptance, *rumination*, *putting into perspective*, *positive refocus*, *refocus on planning*, *positive reappraisal*, *catastrophizing*, and *blaming others*. The CERQ is rated on a 5-point Likert type scale ranging from 1 (*almost never*) to 5 (*almost always*), and subscale scores are obtained by summing the individual item scores that correspond to the related subscale so that each subscale has a score between 4 and 20. Higher scores on the subscales represent greater frequency of engaging in the corresponding emotion regulation strategy.

In previous studies, the CERQ was administered to late adolescents, general adult population, elderly people, and psychiatric patients (Garnefski et al., 2001; Garnefski et al., 2002). Cronbach's alpha coefficients of the subscales across various populations ranged between .68 and. 86, indicating good internal consistency. A study with general adult population yielded test-retest correlations of subscales ranging between .48 (*refocus on planning*) and .65 (*other-blame*; Garnefski & Kraaj, 2007). In terms of construct validity, the CERQ scales had strongest correlations with the Coping Inventory for Stressful Situations (Endler & Parker, 1990) subscales, a result which was in line with expectations as both scales were argued to measure related constructs (Garnefski et al., 2002). Furthermore, a number of the CERQ subscales showed moderate to strong correlations with measures of personality (e.g., NEO 5-factor Personality Test), self-esteem, self-efficacy, as well as measures of psychopathology (Garnefski et al., 2002).

Ways of Coping Inventory (WCI). The original WCI (Folkman & Lazarus, 1980) is a 68-item self-report scale that was developed to assess coping styles people use in stressful situations. The scale was adapted into Turkish by Siva (1991), who changed the original *yes-no* response style into a 5-point Likert scale, and added six additional items in order to cover superstitious beliefs and fatalism used by the Turkish culture. Their study yielded a Cronbach's alpha reliability of .90 for the overall scale. In a later study, hierarchical dimensions of coping styles were examined in a Turkish sample (Gençöz, Gençöz, & Bozo, 2006), and it led to the identification of three distinct factors; namely problem

focused coping, emotion focused coping, and indirect coping. In that study, Cronbach's alpha coefficients were .90 for problem focused, .88 for emotion focused, and .84 for indirect coping subscale. In the present study, WCI was used in order to establish the construct validity of the CERQ. The Cronbach's alpha reliabilities for the present sample were .63 for problem focused, .65 for emotion focused, and .85 for indirect coping subscale.

Brief Symptom Inventory (BSI). The BSI (Derogatis, 1993) is composed of 53 items that evaluate psychological symptom patterns individuals experience in the last two weeks. Each item is evaluated on a 5-point (0 to 4) Likert-type scale where higher scores indicate higher intensity of experiencing the corresponding symptom. The scale was adapted into Turkish by Şahin and Durak (1994). As a result of its construct validity analysis five factors were emerged, namely *anxiety, depression, negative self-concept, somatization,* and *hostility.* Cronbach's alpha coefficents of the subscales ranged from .55 to .86, and ranged from .96 to .95 for the global scale in three different studies, indicating considerable internal consistency reliability (Şahin & Durak, 1994). In the present study, the scale was used to evaluate the criterion validity of the CERQ. Cronbach's alpha reliabilities were .90 for *depression,* .59 for *anxiety,* .64 for *negative self concept,* .81 for *somatization,* and .79 for *hostility* subscales.

General Self-Efficacy Scale (GSE). GSE (Sherer, Maddux, Mercandante, Prentice, Dunn-Jacobs et al., 1982) is a 30-item self-report questionnaire rated on a 5-point (1 to 5) Likert-type scale where higher scores represent higher self-efficacy. The original scale consists of two subscales, namely general and social self-efficacy. The scale was adapted into Turkish culture by Özalp-Türetgen and Cesur (2005, 2007), and the authors reduced the number of items to 19 after conducting item and factor analyses. While Cronbach's alpha coefficients of the whole scale were found to be .82 and .81 in two different studies (Özalp-Türetgen & Cesur, 2005, 2007), test-retest reliability of the scale was found to be .82 (Özalp-Türetgen & Cesur, 2007). The total scale score (calculated by adding up

the individual item scores) representing general self-efficacy was used in the present study in order to seek evidence for the construct validity of the CERQ.

Cronbach's alpha reliability of the whole scale was .85 for the current sample.

3.3. Procedure

The English version of the CERQ was translated into Turkish by three independent graduate clinical psychology students from Middle East Technical University (METU) Psychology Department who are fluently bilingual in English and Turkish languages, and back-translated into English by an independent translator. Then, the original version of the CERQ was compared to the back-translation by two psychology professors from METU Psychology Department, and necessary changes were made before the development of the final version.

The study was approved by the METU Research Center for Applied Ethics. All participants signed informed consent forms, and participation in the study was entirely voluntarily. Data were collected in classrooms in METU and Yaşar University; and through online survey invitations that were sent to the university students. The Time 2 measurement took place after one month. The CERQ and anxiety and depression subscales of the BSI were sent by e-mail to a subscale of 260 participants, and 107(41%) of them were returned.

3.4. Data Analysis

First, confirmatory factor analysis of the sample variance–covariance matrix, using AMOS 20 (Arbuckle, 2011) software with maximum likelihood estimation was used to test the fit of the data to the original nine-factor model. For the rest of the analyses, SPSS 17.0 (SPSS Inc., 2008) software was used. Internal consistency of the total scale and each of the subscales were computed by calculating Cronbach's alpha coefficients. For test-retest reliability coefficients, Pearson correlations were calculated between the CERQ subscale scores of Time

1 and Time 2 measurements. Next, Pearson correlations were calculated among the CERQ subscales; followed by their means and standard deviations. Subsequently, Pearson correlations of the CERQ subscales with coping and general self-efficacy measures was computed to examine construct validity.

Previous studies showed that some of the CERQ subscales predict future depressive and anxiety symptoms (e.g., Garnefski & Kraaj, 2007). Thus, for criterion-related validity the relationship of cognitive coping strategies at Time 1 with psychological symptoms at Time 2 was investigated by calculating Pearson correlations and multiple regression analyses.

CHAPTER 4

RESULTS OF THE STUDY I

4.1. Confirmatory factor analysis

Confirmatory factor analysis of the sample variance–covariance matrix indicated that the original nine-factor model provided an overall adequate fit to the data: SBχ^2 = 1308.5, *df* = 558, $p < .001$, χ^2/df = 2.34, CFI = .870, RMSEA = .058, SRMR = .075. Standardized factor loadings were all significant, ranging from .34 (item 20 to *acceptance*) to .85 (item 11 to *acceptance*), with a mean loading of .70, suggesting that items generally converged meaningfully to the scales as predicted. Except items 20 ("I think that I cannot change anything about it") and 19 ("I think about the mistakes I have made in this matter"), all standardized factor loadings were above .45.

4.2. Correlations among the CERQ subscales

Correlations among the CERQ subscales ranged between .00 (*other-blame* and *putting into perspective*) and .50 (*positive reappraisal* and *refocus on planning*), with a mean correlation coefficient of .20 (see Table 1).

4.3. CERQ means and standard deviations

Means and standard deviations of the CERQ subscales at Time 1 measurement are displayed in Table 2. Among the CERQ subscales, *refocus on planning* was reported to be used most frequently by the participants both at Time 1 (M = 15.33, SD = 2.66) and at Time 2 (M = 15.12, SD = 2.66) measurement. *Catastrophizing*, on the other hand, was reported to be used least often at both measurements (M_1 = 9.21, SD_1 = 3.23; M_2 = 8.78, SD_2 = 3.10).

4.4. Reliability analyses

In order to examine the internal consistency of the CERQ and its subscales, Cronbach's alpha coefficients were computed (see Table 2). At first measurement, while the internal consistency reliability of the subscales ranged between .72 (*self blame*) and .83 (*catastrophizing*), which can be considered as good. Test-retest reliabilities of the individual subscales were also good, ranging between .50 (*blaming others*) and .70 (*self blame*).

4.5. Construct and criterion validities

In order to establish the construct validity of the CERQ Turkish version, Pearson correlations were calculated between the subscales of the CERQ and the Ways of Coping Inventory (Folkman & Lazarus, 1980). As can be seen in Table 3, the correlation of *positive refocusing*, *refocus on planning*, *putting into perspective*, and *positive reappraisal* with problem focused coping was positive and significant ($p < .01$). Furthermore, *catastrophizing* and *self-blame* correlated negatively with problem focused coping ($p < .01$).

The relationship between the use of different cognitive coping strategies and self-efficacy was examined by administering the CERQ and General Self-Efficacy Scale (Sherer et al., 1982) together (see Table 3). *Self-blame, acceptance*, *catastrophizing*, and *blaming others* had significant negative correlations with self-efficacy. On the other hand; *positive reappraisal*, *refocus on planning*, *positive refocusing, and putting into perspective* correlated positively with self-efficacy scores ($p < .01$).

Table 1. *Pearson Intercorrelations among the CERQ Subscales*

	1	2	3	4	5	6	7	8
1.Self blame	-							
2.Acceptance	.26**	-						
3. Rumination	.35**	.26**	-					
4. Positive refocusing	-.04	.04	.00	-				
5. Refocus on planning	.04	.00	.24**	.29**	-			
6. Positive reappraisal	-.07	.07	.11*	.48**	.55**	-		
7. Putting into perspective	.04	.13**	.11*	.33**	.34**	.50**	-	
8.Catastrophizing	.34**	.26**	.28**	-.15**	-.24**	-.32**	-.12*	-
9.Blaming others	.01	.14**	.23**	-.03	-.10*	-.23**	.00	.44**

Note. * $p < .05$, ** $p < .01$

In order to examine criterion related validity, correlations between the CERQ subscale scores and Brief Symptom Inventory (Derogatis, 1993) total and subscale scores were calculated (see Table 3). *Self-blame*, *acceptance*, *rumination*, *catastrophizing*, and *blaming others* exhibited significant positive correlations with general symptoms of psychopathology ($p < .01$). Furthermore, *self-blame*, *rumination*, *catastrophizing* and *blaming others* had significant and positive correlations with *all* symptom patterns.

As the next step in the exploration of criterion related validity, the relationship of Time 1 cognitive emotion regulation strategies with symptoms of depression and anxiety at Time 2 were examined by calculating Pearson correlations among them. Correlations of Time 1 *positive refocusing* ($r = -.30$), *refocus on planning* ($r = -.22$), *positive reappraisal* ($r = -.22$),and *putting into perspective* ($r = -.27$) with Time 2 anxiety scores were significant ($p < .01$). While *positive refocusing* had a significant negative correlation with Time 2 depression scores ($r = -.29$, $p < .01$), *acceptance* had a significant positive correlation with the same variable ($r = .19$, $p < .05$). After controlling for Time 1 anxiety, putting into perspective still correlated significantly with Time 2 anxiety ($r = -.24$, $p < .01$).

In order to examine how Time 1 emotion regulation strategies contribute to depression and anxiety symptoms at Time 2, data was analyzed using two multiple regression analyses. Only Time 1 emotion regulation strategies that significantly correlate with Time 2 symptoms were included. The regression equation examining the prediction of Time 2 depression from Time 1 *acceptance* and *positive refocusing* was significant, $F(2, 105) = 7.18$, $p < .01$, and explained 12% of the variance. *Positive refocusing* significantly predicted Time 2 depression ($\beta = -.29$, $p < .01$), as did *acceptance* ($\beta = .19$, $p < .05$). The equation examining the prediction of Time 2 anxiety symptoms from *positive refocusing*, *refocus on planning*, *catastrophizing*, *positive reappraisal* and *putting into perspective* was also significant, $F(5, 102) = 3.71$, $p < .01$, and explained 15% of

the variance. However, none of the individual cognitive strategies significantly predicted Time 2 anxiety.

Table 2. *Internal Consistency (α) and Re-test Reliabilities, Means and Standard Deviations of the CERQ Subscales*

CERQ subscales	Time 1 α (N=396)	Test-retest r (N=106)	Time 1 M (N=396)	Time 1 SD (N=396)
Self-blame	.72	.70**	12.00	2.43
Acceptance	.74	.58**	12.24	2.75
Rumination	.82	.65**	14.75	3.06
Positive refocusing	.81	.66**	11.29	3.08
Refocus on planning	.81	.60**	15.33	2.66
Positive reappraisal	.79	.63**	14.02	2.88
Putting into perspective	.75	.64**	12.79	2.84
Catastrophizing	.83	.69**	9.21	3.23
Blaming others	.82	.50**	10.72	2.63

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

Table 3. *Correlations of the CERQ Subscales with Symptom Measures, Coping, and Self-efficacy Scores at Time-1 Measurement*

CERQ subscales	BSI total	Depression	Anxiety	Negative self-concept	Somatization	Hostility	PFC	EFC	IC	Self-efficacy
Self-blame	.28**	.29**	.25**	.31**	.21**	.21**	-.19**	.01	.08	-.18**
Acceptance	.17**	.21**	.18**	.19**	.05	.14*	-.06	.21**	.08	-.13*
Rumination	.30**	.32**	.29**	.24**	.13**	.25**	.02	.03	.19**	-.07
Positive refocusing	-.13*	-.18**	-.11	-.14*	-.07	-.10	.23**	.19**	.02	.18**
Refocus on planning	-.09	-.06	-.07	-.00	-.12	-.10	.45**	-.07	.10	.31**
Positive reappraisal	-.13*	-.11	-.11	-.04	-.05	-.14*	.45**	.15*	.07	.32**
Putting into perspective	-.03	-.08	.00	-.04	-.00	-.03	.29**	.36**	.07	.20**
Catastrophizing	.37**	.36**	.33**	.34**	.29**	.38**	-.27**	.22**	.05	-.29**
Blaming others	.27**	.23**	.27**	.15*	.14*	.31**	-.11	.19**	.14*	-.30**

Note 1.$*p < .05$, ** $p<.01$

Note 2.PFC: Problem Focused Coping, EFC: Emotion Focused Coping, IC: Indirect Coping

CHAPTER 5

DISCUSSION OF THE STUDY I

The purpose of this study was to develop a Turkish version of the original CERQ and to validate its psychometric properties in a sample of Turkish university students. Therefore, the fit of the current data to the original nine-factor model was examined. Then, the CERQ's relationship with a common measure of coping styles and general self-efficacy was examined to search for construct validity. Additionally, the association of the CERQ with psychological symptoms was investigated in order to seek evidence for criterion-related validity.

The results indicated that the Turkish version of the CERQ demonstrates an adequate fit to the original nine-factor structure for the current Turkish sample. Furthermore, the Turkish version appeared to be a reliable measure of cognitive emotion regulation strategies, displaying internal and retest reliability values comparable to the original scale.

In line with our hypothesis, *positive reappraisal*, *refocus on planning, putting into perspective*, and *positive refocusing* were positively related to problem-focused coping; a coping strategy that generally includes task-oriented actions directed at solving or managing a problem (Folkman & Lazarus, 1980). In addition, negative correlations were found between problem-focused coping, and *self-blame* and *catastrophizing* subscales of the CERQ. This finding suggested that blaming oneself as the source of problems and catastrophizing the consequences of an event may interfere with active problem solving. In line with our expectations, *positive reappraisal*, *refocus on planning, putting into perspective* and *positive refocusing* had positive relationships with general self-efficacy. On the other hand, s*elf-blame, catastrophizing, rumination,* and *blaming others* were negatively related to self-efficacy scores.

Regarding the criterion-related validity, as expected, engaging in more *rumination*, *self-blame*, *blaming others*, and *catastrophizing* was related to more psychological symptoms; which confirms our hypothesis. This suggests that people who engage in these strategies may be more prone to developing psychological problems. Using more *positive refocusing* was related to less depression and lower negative self-concept scores. The use of *positive refocusing*, *refocus on planning*, *positive reappraisal*, and *putting into perspective* was related to lower levels of anxiety in one month follow-up. In addition, current *positive refocusing* was related to lower depression scores at follow-up. These findings suggest that certain coping strategies may increase functionality and may prevent the development of psychological symptoms.

The findings mentioned above imply that *positive reappraisal*, *refocus on planning, putting into perspective* and *positive refocusing* subscales of the CERQ seem to be more adaptive and functional strategies, whereas s*elf-blame, catastrophizing, rumination,* and *blaming others* subscales appear to be related to psychological symptoms and lower psychological well-being. Similar to some of the previous studies (e.g., Kraaij, Garnefski, & Vlietstra, 2008; Kraaj, Pruymboom, & Garnefski, 2002; Martin & Dahlen, 2005), *acceptance* subscale exhibited significant positive correlations with depressive and anxiety symptoms. Findings of the current study suggested that acceptance is also related to a negative self-concept, hostility, and lower self-efficacy as assessed by the Brief Symptom Inventory (Derogatis, 1993) and General Self-Efficacy Scale (Sherer et al., 1982). One possible explanation for this finding could be that although it has generally been considered as a functional coping strategy (e.g., Garnefski et al., 2001), *acceptance* may not be so adaptive in situations where the stressor can be changed (Carver et al., 1989). As the sample of the current study consisted of university students in their early 20s, who are mostly recruited from a highly competitive university, *acceptance* items could have been appraised as resigning passively to the distressing event. Especially items such as “I think that I cannot change anything about it” might have implied a sense of helplessness and/or

hopelessness for the current sample. In general, findings of this study replicate that *acceptance* subscale shows mixed results across studies. We believe that a further investigation and, if necessary, a revision of this subscale might improve the CERQ's psychometric properties and enhance our understanding of the role of *acceptance* as an emotion regulation strategy.

There are several limitations of the current study that should to be noted. To begin with, the present sample consisted of university students who may not represent the general Turkish adult population; and this limits the generalizability of the results. Another limitation was the use of a non-clinical adult sample in examining the relationship between cognitive coping styles and symptoms of psychopathology. This relationship may be different in clinical samples and should be investigated by future studies. Additionally, although part of our results is based on prospective data; experimental and/or longitudinal designs with wider time intervals are needed in order to fully understand the role of pre-existing cognitive emotion regulation strategies in the development of emotional problems.

In closing, the present study was the first to adapt the original 36-item version of the CERQ into Turkish. The findings imply that the Turkish version is a reliable and valid measure of cognitive emotion regulation strategies. Based on our findings, certain cognitive emotion regulation strategies appear to be related to higher functionality; whereas others appear to be associated with psychopathology and lower psychological well-being. This study also illuminates the relationship of cognitive strategies with hostility, negative self-concept, and somatization. Findings of the current study may be used to develop effective interventions that focus on the use of more adaptive cognitive coping strategies. Lastly, we believe that the Turkish version of the CERQ will facilitate research on cognitive coping in Turkey, which to our knowledge has not yet been studied in this specific population.

CHAPTER 6

STUDY II:
A TEST OF THE EMOTIONAL CASCADE MODEL IN A SAMPLE OF TURKISH UNIVERSITY STUDENTS

According to the emotional cascade model (Selby, Anestis, & Joiner, 2008; Selby & Joiner, 2009; Selby, Anestis, Bender, & Joiner, 2009), the reciprocal relationship between negative affect and ruminative processes results in an "emotional cascade" which can be defined as a positive feedback loop between intense rumination and negative emotions. Emotional cascades are argued to occur mostly after a negative emotion eliciting event. These events trigger rumination, and ruminating about the event and related negative emotions further increases the intensity of psychological distress. As the intensity of negative emotion increases, the person focuses more on the negative experience, and diverting attention away from it becomes more and more difficult (Selby et al., 2009). The end result of an emotional cascade is an intense negative emotion where distracting attention away from negative emotional stimuli is only possible by engaging in impulsive, dysfunctional behaviors. The result of engaging in these behaviors is a short-term relief, which explains why behaviors such as binge eating or NSSI become habitual in the long run (Selby, 2007).

Support for the emotional cascade model comes from two recent studies. By using structural equation modeling, Selby and colleagues (2008) found a relationship between rumination and behavioral dysregulation (i.e., drinking to cope, reassurance-seeking, binge-eating, and urgency), even when controlling for the current symptoms of depression and anxiety, and for a deficit in adaptive emotion regulation strategies (see Figure 1). More recently, the model was tested with an undergraduate sample diagnosed with borderline personality disorder; and

emotional cascades fully mediated the relationship between the symptoms of borderline personality disorder and behavioral dysregulation (i.e., excessive reassurance-seeking, bulimic behaviors, drinking to cope, NSSI, and suicide attempts), after controlling for the current symptoms of depression and other Cluster B personality disorders (Selby et al., 2009; see Figure 2).

As previously discussed in Chapter 1, thought suppression has consistently been related to psychopathology in numerous studies. Furthermore, although rumination and thought suppression sound like opposite constructs, they seem to go together, because evidence suggests that suppressing ruminative thoughts seem to result in more rumination (Wenzlaff & Luxton, 2003). For example, in his study with depressed patients Szasz (2009) showed that the impact of thought suppression on depressive symptoms is mediated by depressive rumination. Selby and colleagues (2008) argued that thought suppression is part of the ruminative processes, and is one of the indicators of emotional cascades. Their point here is, as the individual ruminates on negative mood, he or she tries to suppress these unwanted thoughts, which creates a rebound effect. The end result is an increase in dysphoric rumination, as well as in negative affect. Although the role of thought suppression in emotional cascades was proposed by the emotional cascades model, none of the previous studies tested the hypothesis that thought suppression is an indicator of ruminative processes. In the present study, for the first time, a measure of thought suppression was included among the measures of emotional cascades.

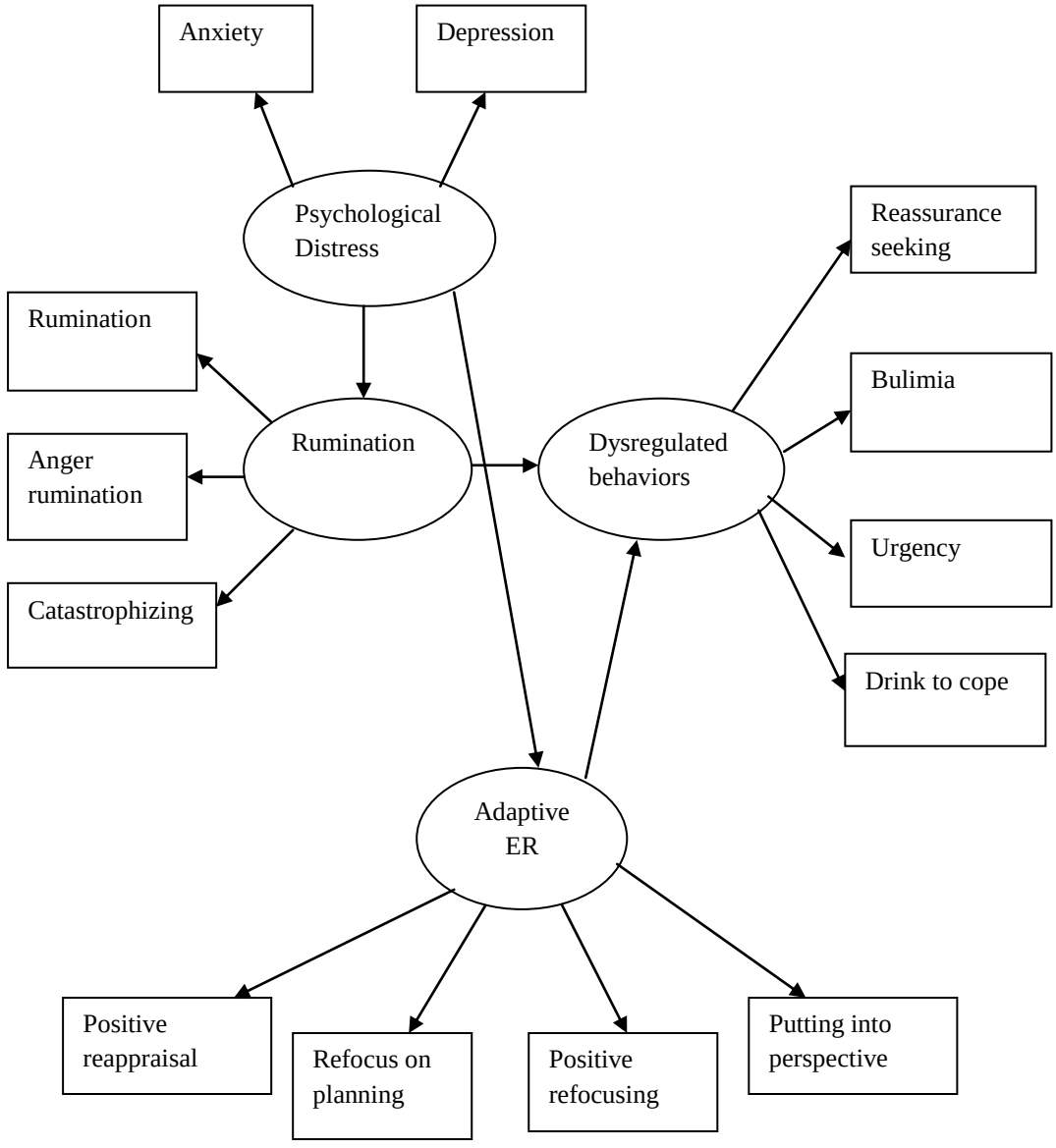

Figure 1. *Emotional cascade model of dysregulated behaviors in Selby et al., 2008.*

Note. ER: Emotion regulation

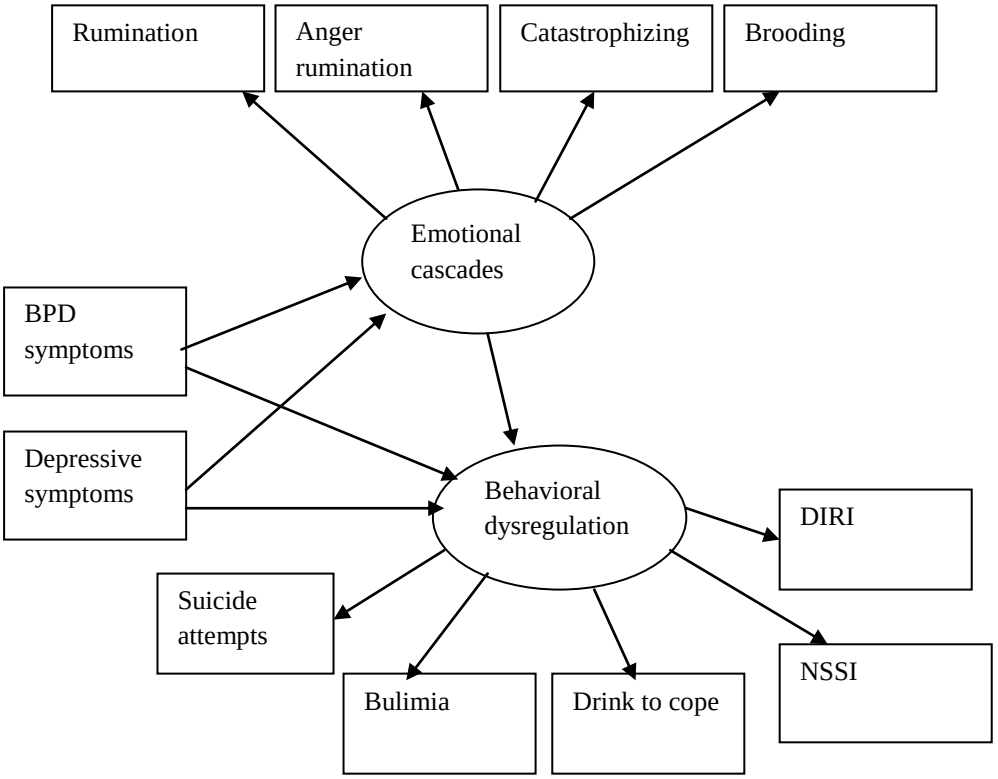

Figure 2.*Mediational effect of rumination on the relationship between symptoms of BPD and behavioral dysregulation (Selby et al., 2009)*

Note. DIRI: Depressive Interpersonal Relations Inventory

The current study has been designed to examine the effect of cognitive emotion dysregulation on behavioral dysregulation. This relationship was tested by using the framework of emotional cascade model proposed by Selby and colleagues (2008, 2009) in a sample of Turkish university students.

The hypotheses of the Study 2 tested by a structural equation model (see Figure 3), were as follows:

1) There will be three latent variables in the model: emotional cascades, behavioral dysregulation, and current psychological distress,
2) Emotional cascades latent variable is hypothesized to have three indicators; rumination, thought suppression, and catastrophizing,
3) Behavioral dysregulation latent variable is hypothesized to have four indicators: non-suicidal self-injury, drinking to cope, excessive reassurance-seeking, and bulimic symptoms,
4) It was hypothesized that there will be a relationship between emotional cascades and behavioral dysregulation latent variables;
5) Psychological distress latent variable was included in the model as a covariate based on the previous studies (Selby et al., 2008; Selby & Joiner, 2009) in order to control for the effect of recent psychological distress on dysregulated behaviors. Current depressive and anxiety symptoms are chosen as indicators of the psychological distress latent variable.
6) Thus, after controlling for the effects of current psychological distress, it was hypothesized that the emotional cascades will still be associated to behavioral dysregulation.

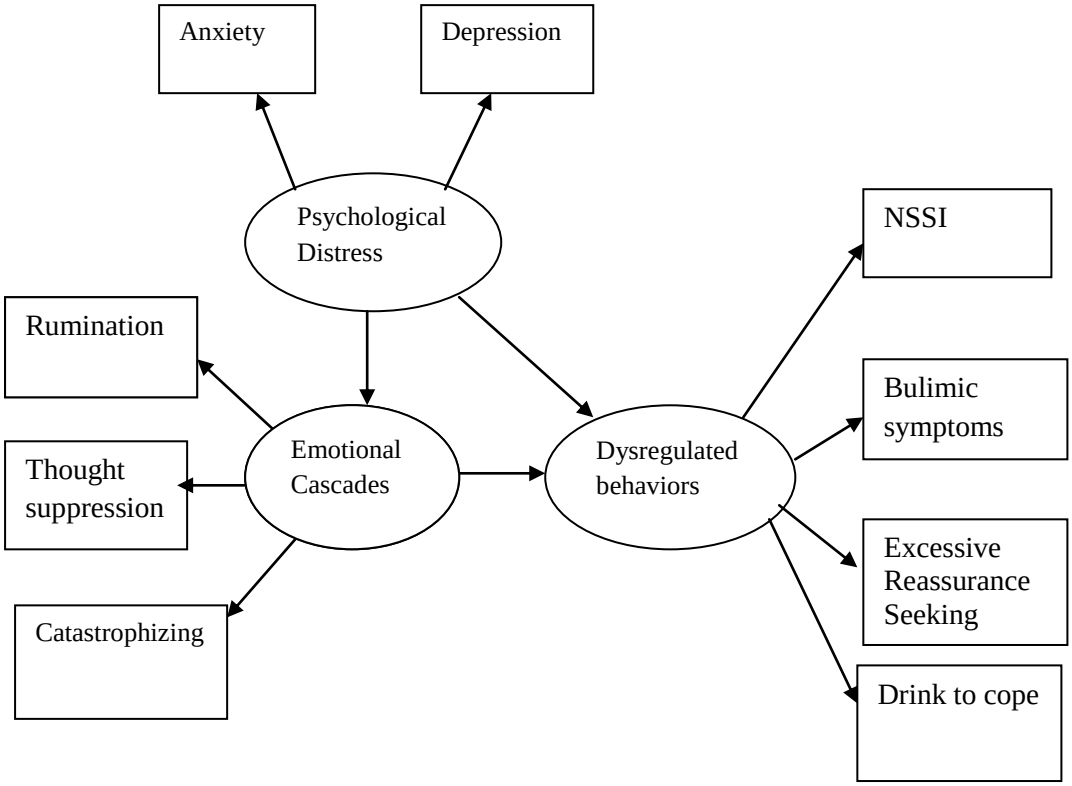

Figure 3. *Hypothesized model of emotional cascades in the present study*

CHAPTER 7

METHOD OF THE STUDY 2

7.1. Participants

Five-hundred and seven Turkish university students (72 % female, *n* = 365; 28 % male, *n* = 142) participated in the study with ages ranging between 18 and 44 (*M* = 23.12, *SD* = 3.18). Demographic characteristics of the sample can be seen in Table 4. To summarize, 73 % (*n* = 370) of the participants were undergraduates, whereas 19.9 % (*n* = 101) were master's students, and 7.1 % (*n* = 36) were doctorate level students in Turkey. In terms of perceived socioeconomic status, 17.5 % (*n* = 89) of the sample rated themselves as belonging to low/below average, 59 % (*n* = 299) to average, and 23.5 % (*n* = 119) to above average/ high socio-economic status. In terms of marital status, 95.9 % of the sample (*n* = 486) reported themselves as being single at the time of the measurement. Majority of the participants reported that they lived the longest period of their lives in a metropolitan (56.6 %, *n* = 287) or city (26 %, *n* = 132).

In terms of psychiatric history, 16 % (*n* = 81) of the sample reported having experienced a psychological disorder that required treatment in the past. Among these participants, 51.9 % (*n* = 42) reported experiencing major depression and 21 % (*n* = 17) of them reported suffering from one of the anxiety disorders.

Table 4. *Descriptive Information of Study 2 Demographic Variables*

	N	**%**
Gender		
Female	365	72
Male	142	28
Marital Status		
Single	486	95.9
Married	19	3.7
Divorced	2	0.4
Department		
Psychology	300	59.2
Non-psychology	207	40.8
Current Level of Study		
Undergraduate	370	73
Masters	101	19.9
PhD	36	7.1
Perceived SES		
Low/Below Average	89	17.5
Average	299	59
Above Average/ High	119	23.5
Hometown		
Rural	16	3.2
Town	10	2
County	62	12.2
City	132	26
Metropolitan	287	56.6
Current Place of Stay		
Dorm	192	37.9
With Family	158	31.2
With Friends	99	19.5
Other	58	11.4

When asked about their current treatment status (under treatment or not), 3.1 % (n = 20) of the sample reported having been receiving psychological treatment at the time of the assessment.

7.2. Materials

Demographic Information Form. A demographic information form was developed by the author, which consisted of questions on age, marital status, perceived socio-economic status, level of studies, hometown, and current place of stay. Additionally, past and current psychological problems as well as treatment history were also asked.

Cognitive Emotion Regulation Questionnaire (CERQ). The CERQ (Garnefski et al., 2001) is a 36-item self-report questionnaire that was developed to assess the use of nine cognitive emotion regulation strategies that people use after negative events or situations. Each subscale consists of four items representing different emotion regulation strategies, namely *self-blame*, *acceptance*, *rumination*, *putting into perspective*, *positive refocus*, *refocus on planning*, *positive reappraisal*, *catastrophizing*, and *blaming others*. The CERQ is rated on a 5-point Likert type scale ranging from 1 (*almost never*) to 5 (*almost always*), and subscale scores are obtained by summing the individual item scores that correspond to the related subscale. Accordingly, each subscale has a score between 4 and 20. Higher scores on the subscales represent greater frequency of engaging in the corresponding emotion regulation strategy.

The Turkish version of the CERQ has been developed by the author in Study 1 and its psychometric properties were found to be comparable to the original scale. For the aims of the current study, only *rumination* and *catastrophizing* subscales were administered to the participants as indicators of the emotional cascades. The *rumination* subscale (e.g., “I often think about how I feel about what I have experienced”) measures the tendency to focus attention on the feelings and thoughts associated with a negative event.

The *catastrophizing* subscale (e.g., "I continually think how horrible the situation has been") measures the tendency to focus on the negative consequences of an event, in addition to its negative future implications. For the current sample, the Cronbach's alpha reliabilities of the *rumination* and *catastrophizing* scales were .85 and .83, respectively.

White Bear Suppression Inventory (WBSI). The WBSI (Wegner & Zanakos, 1994) is a 15-item self report measure that was developed to evaluate people's tendency toward suppressing unwanted thoughts. The items are rated on a 5-point Likert-type scale, ranging from 1 to 5 (1 = *strongly disagree* to 5 = *strongly agree*) where higher scores indicate a stronger tendency toward thought suppression.

WBSI showed high internal consistency values across several large samples, with Cronbach's alphas ranging from .87 to .89 (Schmidt et al., 2009). WBSI was also found to correlate with measures of obsessive thinking, depressive and anxious affect; indicating construct and predictive validity (Wegner & Zanakos, 1994). The scale was adapted into Turkish by Altın and Gençöz (2009). Their study revealed a Cronbach's alpha coefficient for internal reliability as .90, and test-retest correlation (after a 4-week interval) as .80. For the current sample, Cronbach's alpha reliability of the scale was found as .90.

Eating Disorders Examination-Questionnaire (EDE-Q). EDE-Q (Fairburn & Beglin, 1994) is the self-report version of the widely used interview for the assessment of eating disorder symptoms; that is Eating Disorders Examination (Fairburn & Cooper, 1993). The questionnaire version consists of 36 items scored on a 7-point Likert-type scale. The frequency of each eating disorder symptom is assessed in terms of number of days that particular behavior has occurred in the last 4 weeks. EDE-Q has 4 subscales, which are *weight concern*, *shape concern*, *eating concern*, and *restraint*. Additionally, there are also items that measure binge eating and compensatory behaviors such as laxative misuse (Fairburn & Beglin, 1994).

Four studies conducted with community or clinical samples demonstrated adequate internal consistency values for EDE-Q, with Cronbach's alpha reliabilities ranging from .70 to .93 for the subscales (Berg, Peterson, Frazier, & Crow, 2012). Test-retest reliability of the subscale scores over 5 to 14 months was examined in several studies and it ranged from .57 to .82 for individual subscales (Berg et al., 2012). Validity studies showed that EDE-Q is able to differentiate between eating disorders cases and noncases (Berg et al., 2012), and there is a high agreement between EDE questionnaire and interview scores on the assessment of behaviors such as self-induced vomiting and dietary restraint; although there was a discrepancy between binge eating scores obtained from interview and self-report versions (Fairburn & Beglin, 1994).

The Turkish adaptation of the scale was done by Yücel, Polat, İkiz, Pirim-Düşgör, Yavuz, and Sertel-Berk (2011). In their study, they confirmed the existence of four subscales for the Turkish EDE-Q (i.e., *weight concern*, *shape concern*, *eating concern*, and *restraint*). The Cronbach's alpha reliability for the total scale was .93, and it ranged from .63 (*binge eating*) to .86 (*shape concern*) for the subscales. Furthermore, the test-retest reliability coefficients ranged between .43 (*binge eating*) and .89 (*weight concern*) for individual subscales.

For the purpose of the present study, *binge eating* dimension (as measured by the items 13, 14, 15, 16, 17, and 18) was used to assess bulimic episodes (based on DSM-IV criteria; [American Psychiatric Association, 1994]) that participants have engaged over the last four weeks. For the current sample, the Cronbach's alpha coefficient for this dimension was found as .64.

Drinking Motives Questionnaire-Revised (DMQ-R): DMQ-R (Cooper, 1994) is a 20-item self-report measure that was developed based on the conceptual model by Cox and Klinger (1988) that categorizes underlying drinking motives based on valence (positive or negative) and source (internal and external) of outcomes an individual hopes to achieve by drinking (Cooper, 1994).

The scale assesses 4 dimensions of drinking motives, namely coping motives (e.g., "to forget about your problems"), enhancement motives (e.g., "because it's fun"), social motives (e.g., "to be sociable"), and conformity motives (e.g., "so you won't feel left out"), each measuring a particular motivation for alcohol use. Each dimension is measured by 5 questions and the items are scored on a Likert-type scale ranging from 1 (never) to 5 (always), with subscale scores ranging between 4 and 20. Higher scores on a subscale mean a higher tendency of an individual to attribute drinking behavior to the corresponding motive. Cronbach's alpha reliability of the subscales for coping, enhancement, social, and confirmatory motives were found as .84, .88, .85, and .85, respectively (Cooper, 1994).

The scale was adapted to Turkish by Evren, Çelik, Aksoy, and Çetin (2010). In their study, Cronbach's alpha reliability of the subscales for coping, enhancement, social, and confirmatory motives were found as .84, .79, .85, and .79, respectively; and the test–retest correlations ranged between .55 and .66, with highest correlation belonging to the *drinking to cope* subscale (r = .66).

In the present study, only the *drinking to cope* subscale was used in order to measure the participants' tendency to consume alcohol in an attempt to cope with their negative emotions. The internal consistency reliability of this subscale was .96 for the current sample.

The Depressive Interpersonal Relationships Inventory (DIRI). DIRI **(**Joiner, Alfano, & Metalsky, 1992) is a 24-item self-report inventory that measures the variables from Coyne's (1976) interpersonal theory of depression, including reassurance-seeking, need for approval, doubting others' sincerity, and general dependency. For each item participants use a 7-point Likert type scale in order to indicate their interpersonal styles.

Four items (i.e., items 20 to 23) from DIRI assesses the degree to which individuals seek reassurance of worth from others (Joiner & Metalsky, 2001).

Reassurance-seeking has been demonstrated as a viable and valid construct, distinct from other interpersonal styles measured by DIRI. It was also shown to precede future depressive symptoms and moderate depressive reactions to distress (Joiner & Metalsky, 2001). Reassurance-seeking subscale was adapted into Turkish by Gençöz and Gençöz (2005), and the internal consistency reliability of the Turkish version was found as .86.

The reassurance-seeking dimension will be used as one of the indicators of behavioral dysregulation in the present study because in previous studies it was argued to function as a distraction from ruminative processes (e.g., Selby, 2007). For the current sample, the Cronbach's alpha of the subscale was .84.

Beck Depression Inventory (BDI). The BDI (Beck et al., 1979) is a widely used self-report measure of depressive symptoms. It was first published in 1961 (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961) and revised in 1979 (Beck et al., 1979). BDI consists of 21-items assessing emotional, somatic, cognitive, and motivational symptoms of depression. Participants use a 4-point Likert-type scale ranging from 0 to 3 to rate how much each item describes their affective states over the past two weeks. Psychometric properties of the BDI were extensively reviewed by previous studies.

The inventory was adapted into Turkish by Tegin (1980) and Hisli (1988, 1989) with reliability and validity values comparable to the original ones. Test-retest reliability of the Turkish version was found as .65, whereas the split-half reliability was .78 for students and .61 for patients with major depression. For criterion validity, its correlation with Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1940) depression subscale was examined and found as .63 for clinical sample (Hisli, 1988), and .50 for university students sample (Hisli, 1989).

Total BDI score was used as an indicator of current psychological distress in the present study. For the current sample, the Cronbach's alpha reliability of the scale was found as .90.

Beck Anxiety Inventory (BAI). The BAI (Beck, Epstein, Brown, & Steer, 1988) is a 21-item, self-report measure that evaluates symptoms of anxiety over the past two weeks. Each item is rated on a 4-point Likert-type scale (0–3) and higher scores reflect higher levels of anxiety symptoms experienced by the participants.

The scale was adapted into Turkish by Ulusoy, Şahin, and Erkmen (1996), and Cronbach's alpha reliability of the Turkish version was found as .93. In their study, the test-retest reliability of the Turkish BAI was .57. In the present study, the total score obtained from Turkish BAI was used as one of the indicators of current psychological distress in participants' lives. The Cronbach's alpha reliability of the scale was .90 for the current sample.

Self-mutilation Index. An index consisting of several methods of non-suicidal self injury (e.g., cutting, burning) was developed by the author in order to assess the frequency of self-mutilative behaviors that participants engage in over the course of past year. In order to develop these items, relevant literature was reviewed to come up with a list of self-mutilative behaviors. Next, opinions of two clinical psychologists, one of which was specialized on self-mutilative behaviors, who work in private practice were asked on the selected items. Based on their suggestions, the index was adapted according to the characteristics of the clinical Turkish population.

The finalized index consisted of 14 self-mutilative behaviors (See Appendix). For each behavior, participants indicated whether and how often they engaged in the listed behavior over the course of the past year, with a space provided for any methods not listed. A total score of self-mutilation was arrived by summing up the frequencies of engaging in each behavior over the course of

last year. Cronbach's alpha reliability of the scale was .67 for the current sample.

7.3. Procedure

Before the data collection, the study was approved by the Middle East Technical University (METU) Research Center for Applied Ethics. All participants signed informed consent forms, and participation in the study was entirely voluntarily. Five hundred and seven university students who are enrolled in psychology courses in METU Psychology Department completed the surveys either in classrooms or through online survey invitations that were sent to their e-mail accounts. Upon the completion of questionnaires, the participants were given extra course credit for their participation.

7.4. Data Analysis

Before testing the model fit, univarite analyses of normality were conducted and transformations were used to increase normality of the variables. Then a series of ANOVAs were conducted to test for possible demographic group differences on dependent variables. For these analyses, SPSS 17.0 (SPSS Inc., 2008) software was used.

Next, the data was analyzed by using Structural Equation Modeling (SEM) techniques with maximum likelihood estimation to test the fit of the data to the hypothesized model. SEM is a combination of statistical techniques that evaluate consistency of the relationships between variables according to a theory, using both observed (indicator) and unobserved (latent) variables (Tabachnick & Fidel, 2007). SEM analyses were conducted by using AMOS 20 (Arbuckle, 2011) software.

CHAPTER 8

RESULTS OF THE STUDY 2

Preliminary to the SEM analysis, univariate analyses of normality were conducted using a skewness/kurtosis index of + or - 2. These analyses revealed that anxiety was significantly skewed (skewness = 2.35) and kurtic (kurtosis = 6.5), as well as depression (skewness = 2.67, kurtosis = 8.89), non-suicidal self-injury (NSSI; skewness = 2.30, kurtosis = 6.25) and bulimia (skewness = 11.25, kurtosis = 13.67). Square-root transformations were used to satisfy assumptions of normality, and transformed variables were used for the rest of the analyses.

The means, standard deviations, correlations, and Cronbach's alpha reliabilities for the Study 2 variables are listed on Table 5. The means and standard deviations reported here are obtained before the transformation of variables.

8.1. Demographic Comparisons on Study 2 Variables

Before the SEM analysis, demographic categories were compared on Study 2 variables. Because gender variances have been found in previous studies on variables such as rumination (Nolen-Hoeksema, Larson, & Grayson, 1999), independent samples t-tests were run to assess any gender differences among groups. Descriptive statistics and the results of t-tests can been seen in Table 6. The only significant difference between males and females was found on rumination scores. Female participants (*m* = 15.5, *sd* = 2.99) reported engaging in

Table 5.*Correlations among; and means, standard deviations, α coefficients for observed variables in Study 2*

	1	2	3	4	5	6	7	8	9
1.Rumination	1								
2.Thought suppression	.17**	1							
3.Catastrophizing	.17**	.36**	1						
4.Reassurance Seeking	.17**	.27**	.29**	1					
5.NSSI	.06	.26**	.21**	.17**	1				
6.Bulimia	00.	.21**	.13**	.16**	.24**	1			
7.Drink to cope	.10*	.23**	.16**	.12**	.20**	.14**	1		
8.Depression	.16**	.41**	.40**	.27**	.40**	.22**	.33**	1	
9.Anxiety	.17**	.38**	.33**	.25**	.36**	.21**	.26**	.53**	1
M	15.07	49.29	8.97	12.10	.83	6.82	9.41	2.25	3.92
SD	3.07	11.10	3.24	5.23	1.45	12.20	4.92	3.85	5.60
α	.85	.90	.83	.84	.67	.64	.96	.85	.90

Note 1. * p <.05, ** p <.01
Note 2. NSSI: Non-suicidal self-injury
*Note 3.*α: Cronbach's alpha coefficient for internal consistency reliability

Table 6. *Descriptive Statistics and t-test results for groups based on gender, marital status, and department.*

	Rumination			Catastrophizing			Thought Suppression		
Variable	*M*	*SD*	*t*(505)	*M*	*SD*	*t*(505)	*M*	*SD*	*t*(505)
Gender			4.59**			1.23			1.56
Female	15.46	2.98		9.08	3.21		49.77	10.78	
Male	14.09	3.06		8.69	3.31		48.06	11.83	
Marital status			.64			2.14*			3.85**
Single	15.09	3.08		9.03	3.25		49.66	10.95	
Married	14.63	2.79		7.42	2.46		39.79	10.87	
Department			4.86**			.04			-2.73**
Psychology	15.86	2.76		8.98	3.14		47.68	11.72	
Non-psychology	14.54	3.15		8.97	3.31		50.40	10.53	
	Depression			**Anxiety**			**Reassurance Seeking**		
Variable	*M*	*SD*	*t*(505)	*M*	*SD*	*t*(505)	*M*	*SD*	*t*(505)
Gender			-1.29			1.44			1.36
Female	.91	1.13		1.52	1.32		12.29	5.29	
Male	1.06	1.23		1.33	1.34		11.59	5.06	
Marital status			1.44			.64			1.97
Single	.97	1.16		1.48	1.33		12.19	5.2	
Married	.58	1.1		1.28	1.29		9.79	5.67	
Department			-1.44			.05			.54
Psychology	.86	1.12		1.47	1.31		12.25	5.07	
Non-psychology	1.01	1.18		1.47	1.34		11.99	5.35	
	NSSI			**Bulimia**			**Drink to Cope**		
Variable	*M*	*SD*	*t*(505)	*M*	*SD*	*t*(505)	*M*	*SD*	*t*(505)
Gender			-1.67			-.14			-1.43
Female	.49	.70		1.81	1.88		9.21	4.73	
Male	.61	.85		1.83	1.78		9.91	5.38	
Marital status			-.26			1.92			2.18*
Single	.52	.75		1.84	1.87		9.5	4.93	
Married	.57	.78		1.01	1.21		7.00	4.03	
Department			-1.18			-.80			-.51
Psychology	.48	.72		1.73	1.93		9.27	4.64	
Non-psychology	.56	.76		1.87	1.79		9.50	5.11	

Note. * $p < .05$, ** $p < .001$

rumination more than male participants (m = 14.1, sd = 3.06), $t(505) = 4.59$, $p < .001$.

As regard to group differences based on marital status; divorced and single categories were merged because there were only two divorced participants in the sample. Accordingly, an independent samples t-test was run to test the group differences. Results showed that single participants (m = 49.66, sd = 10.95) reported more thought suppression than married participants (m = 39.79, sd = 10.87), $t(505) = 3.85$, $p < .001$. Single participants did also report more frequent engagement in drinking to cope (m = 9.5, sd = 4.93) and more catastrophizing (m = 9.03, sd = 3.24) than married participants (m = 7.0, sd = 4.03; m = 7.42, sd = 2.46), $t(505) = 2.18$, $p < .05$ and $t(505) = 2.14$, $p < .05$, respectively (See Table 6 for descriptive statistics and t-test results).

A one-way analysis of variance (ANOVA) comparing participants from different perceived SES showed that groups differ significantly on bulimia symptoms, $F(4, 506) = 3.02$, $p = .02$. According to pairwise comparisons using the Scheffé post hoc criterion for significance, participants from low/below average SES (m = 2.33, sd = 2.21) reported more bulimic symptoms than both participants from average (m = 1.78, sd = 1.77) and above average/high (m = 1.52, sd = 1.68) SES. Descriptive statistics and ANOVA results based on perceived SES are given in Table 7.

Regarding the differences based on hometown, group differences were found on catastrophizing ($F(4, 506) = 5.19$, $p < .01$), excessive reassurance-seeking ($F(4, 506) = 4.99$, $p < .01$), thought suppression ($F(4, 506) = 5.13$, $p < .001$), depression ($F(4, 506) = 3.92$, $p < .01$) and anxiety scores ($F(4, 506) = 3.47$, $p < .01$). Descriptive statistics and ANOVA results are given in Table 8.

Table 7. *Descriptive statistics and ANOVA results for SES*

		M	*SD*	*F*(2, 506)
Rumination				.15
	Low/Below average	14.92	3.05	
	Average	15.09	3.06	
	Above average/high	15.15	3,12	
Thought suppression				2.79
	Low/Below average	48.26	11.68	
	Average	50.25	10.75	
	Above average/high	47.66	11.35	
Catastrophizing				.11
	Low/Below average	8.87	3.37	
	Average	9.03	3.31	
	Above average/high	8.92	2.97	
Depression				1.54
	Low/Below average	1.14	1.27	
	Average	.93	1.13	
	Above average/high	.87	1.13	
Anxiety				.21
	Low/Below average	1.52	1.36	
	Average	1.48	1.32	
	Above average/high	1.41	1.32	
NSSI				.65
	Low/Below average	.60	.75	
	Average	.51	.74	
	Above average/high	.49	.76	
Bulimia				5.19*
	Low/Below average	2.33	2.21	
	Average	1.78	1.77	
	Above average/high	1.52	1.68	
Reassurance Seeking				2.07
	Low/Below average	12.77	5.77	
	Average	12.2	5.13	
	Above average/high	11.34	5.03	
Drink to cope				.71
	Low/Below average	8.84	4.79	
	Average	9.51	4.86	
	Above average/high	9.57	5.18	

Note. *p<.001

Pairwise comparisons using the Scheffé post hoc criterion for significance showed that participants who spent the longest period of their lives in rural areas reported more thought suppression (*m* = 54.6, *sd* = 9.17) and more depressive symptoms (*m* = 1.3, *sd* = 1.32) than participants who spent the longest period of their lives in towns (*m* = 38.9, *sd* = 13.89 and *m* = 0.3, *sd* = 0.60, respectively), and more depressive symptoms than participants who lived in counties (*m* = 0.7, *sd* = 0.98). Participants who spent most of their lives in cities reported (*m* = 51.6, *sd* = 10.57) more thought suppression than participants who lived in towns (*m* = 38.9, *sd* = 13.89). Furthermore, participants from cities reported more catastrophizing (*m* = 9.7, *sd* = 3.57) and more excessive reassurance-seeking (*m* = 13.2, *sd* = 5.46) than participants from municipalities (*m* = 8.6, *sd* = 3.1 and *m* = 11.5, *sd* = 5.23, respectively).

In order to examine the differences between departments (psychology vs. non-psychology) on the Study 2 measures, several independent samples t-tests were conducted. Results revealed significant differences between groups on thought suppression and rumination scores. More specifically, participants from the psychology department reported more rumination (*m* = 15.86, *sd* = 2.76) than participants from other departments *(m* = 14.54, *sd* = 3.15), *t*(505) = -2.73, *p* < .01. On the other hand, participants from other departments reported more thought suppression (*m* = 50.40, *sd* = 10.53) than participants from the psychology department, *(m* = 47.68, *sd* = 11.72), *t*(505) = 4.86, *p* < .001 (See Table 6 for descriptive and t-test results).

Group comparisons based on current level of studies using several one way ANOVAs showed that groups differ on thought suppression (*F*(2, 506) = 9.98, *p* < .001), excessive reassurance-seeking (*F*(2, 506) = 5.57, *p* < .01),

Table 8. *Descriptive statistics and ANOVA results for hometown*

		M	*SD*	*F*(4, 506)
Rumination				.96
	Rural	14.63	2.25	
	Town	14.2	3.61	
	County	14.97	3.14	
	City	15.48	2.64	
	Metropolitan	14.97	3.25	
Thought suppression				5.13**
	Rural	54.63	9.37	
	Town	38.9	13.89	
	County	48.39	1027	
	City	51.57	10.57	
	Metropolitan	48.51	11.19	
Catastrophizing				3.87*
	Rural	10.0	2.66	
	Town	7.10	2.56	
	County	9.16	3.07	
	City	9.69	3.57	
	Metropolitan	8.61	3.1	
Depression				3.92*
	Rural	1.81	1.32	
	Town	.28	.60	
	County	.72	.98	
	City	1.03	115	
	Metropolitan	.94	1.18	
Anxiety				3.47*
	Rural	2.06	1.65	
	Town	1.21	1.54	
	County	.97	1.01	
	City	1.58	1.41	
	Metropolitan	1.50	1.3	
NSSI				.48
	Rural	.59	.84	
	Town	.55	.88	
	County	.40	.66	
	City	.54	.74	
	Metropolitan	.54	.76	

Table 8 (cont'd)

		M	*SD*	*F*(4, 506)
Bulimia				1.95
	Rural	2.94	2.74	
	Town	1.05	1.33	
	County	1.75	1.70	
	City	1.78	1.88	
	Metropolitan	1.8	1.81	
Reassurance Seeking				4.99*
	Rural	15.37	4.08	
	Town	9.3	3.83	
	County	12.39	4.45	
	City	13.18	5.46	
	Metropolitan	11.45	5.23	
Drink to cope				1.91
	Rural	10.75	5,49	
	Town	7.20	4,13	
	County	8.61	4,09	
	City	8.96	4,88	
	Metropolitan	9.78	5,07	

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

depressive symptoms (F(2, 506) = 4.28, p < .05), anxiety symptoms (F(2, 506) = 4.34, p < .05), catastrophizing (F(2, 506) = 4.31, p < .05), and bulimia (F(2, 506) = 9.46, p < .001) scores (See Table 9 for descriptive statistics and ANOVA results). Pairwise comparisons using the Scheffé post hoc criterion indicated that undergraduate students reported more thought suppression (m = 50.5, sd = 10.32) than masters level (m = 47.1, sd = 12.3) and PhD level (m = 43.1, sd = 12.55) students. Undergraduate students also reported more excessive reassurance-seeking (m = 12.5, sd = 5.2), more anxiety symptoms (m = 1.6, sd = 1.35) and more catastrophizing (m = 9.2, sd = 3.26) than PhD students (m = 10.0, sd = 1.03; m = 0.9, sd = 1.06; m = 7.7, sd = 2.39, respectively). Furthermore, undergraduate students reported more bulimic symptoms (m = 2.0, sd = 1.89) compared to masters' level students (m = 1.21, sd = 1.61).

Table 9. *Descriptive statistics and ANOVA results for the level of studies*

		M	*SD*	*F*(2, 506)
Rumination				2.43
	Undergraduate	14.9	3.07	
	Masters	15.64	2.87	
	PhD	15.28	3.35	
Thought suppression				9.98***
	Undergraduate	50.48	10.32	
	Masters	47.15	12.3	
	PhD	43.08	12.55	
Catastrophizing				4.31*
	Undergraduate	9.19	3.26	
	Masters	8.62	3.31	
	PhD	7.69	2.39	
Depression				4.28*
	Undergraduate	1.04	1.2	
	Masters	.74	1.00	
	PhD	.61	1.03	
Anxiety				4.34*
	Undergraduate	1.56	1.35	
	Masters	1.33	1.26	
	PhD	.94	1.06	
NSSI				1.68
	Undergraduate	.56	.78	
	Masters	.41	.62	
	PhD	.49	.68	
Bulimia				9.46***
	Undergraduate	2.03	1.89	
	Masters	1.21	1.61	
	PhD	1.32	1.6	
Reassurance Seeking				5.57**
	Undergraduate	12.53	5.2	
	Masters	11.28	4.95	
	PhD	9.97	5.68	

Table 9 (cont'd)

		M	*SD*	*F*(2, 506)
Drink to cope				.08
	Undergraduate	9.36	4.96	
	Masters	9.58	4.86	
	PhD	9.36	4.84	

Note. *$p < .05$, **$p < .01$, *** $p < .001$.

Participants were asked where they were accommodating during their studies and were categorized based on their places of stay. Then these groups were compared on study variables using several one way ANOVAs. Results showed that groups differ on thought suppression ($F(3, 506) = 6.02$, $p < .001$), excessive reassurance-seeking ($F(3, 506) = 5.61$, $p < .01$), catastrophizing ($F(3, 506) = 4.03$, $p < .01$), and bulimia symptoms ($F(3, 506) = 3.68$, $p < .05$). Post hoc comparisons using the Scheffé criterion revealed that participants who stay in dorms at the time of the measurement reported more thought suppression ($m = 51.2$, $sd = 10.23$), more reassurance-seeking ($m = 13.0$, $sd = 4.98$), and more bulimic symptoms ($m = 2.1$, $sd = 1.92$) than participants who stay with their families ($m = 47.8$, $sd = 11.05$; $m = 11.3$, $sd = 5.24$; $m = 1.5$, $sd = 1.71$, respectively).

Participants who stay in dorms reported more thought suppression ($m = 51.2$, $sd = 10.23$) and more excessive reassurance-seeking ($m = 13.0$, $sd = 4.98$) than participants who stay in other accommodation options ($m = 45.2$, $sd = 11.62$ and $m = 10.48$, $sd = 5.01$, respectively). Participants who live with their friends reported more thought suppression ($m = 50.38$, $sd = 11.67$) and more catastrophizing ($m = 9.72$, $sd = 3.16$) than participants who live in other accommodation options ($m = 45.16$, $sd = 11.62$; $m = 7.97$, $sd = 2.85$, respectively).

Participants who had experienced a psychological problem that required treatment in the past, and who had not were compared on Study 2 variables using several independent samples t-tests (see Table 11 for descriptive statistics and t-test results). Results showed that participants who have had psychological problems reported more anxiety (m = 2.0, sd = 1.43) and depressive symptoms (m = 1.31, sd = 1.30) compared to participants who do not have a history of psychological problems (m = 1.37, sd = 1.28; m = 0.88, sd = 1.12), $t(505) = 3.96$, $p < .001$ and $t(505) = 3.10$, $p < .01$, respectively. These participants did also report more excessive reassurance-seeking (m = 13.91, sd = 5.77) than participants who did not receive any psychological treatment (m = 11.75, sd = 5.06), $t(505) = 3.44$, $p < .01$.

Additionally, participants who reported a history of psychological problems had higher drinking to cope scores (m = 10.75, sd = 5.56) than participants who do not have a history (m = 9.15, sd = 4.76), $t(505) = 2.70$, $p < .01$. Furthermore, participants who have past psychological problems had higher catastrophizing (m = 10.0, sd = 3.22) and rumination scores (m = 15.81, sd = 2.72) than participants who have not had psychological problems (m = 8.78, sd = 3.21; m = 14.93, sd = 3.11), $t(505) = 3.14$, $p < .01$ and $t(505) = 2.38$, $p < .05$, respectively.

Lastly, participants who were under psychological treatment at the time of the assessment were compared to participants who were not, using several independent samples t-tests (see Table 12). As a result, significant differences were found between two groups on depressive and anxiety symptoms, excessive reassurance-seeking, drinking to cope, rumination and catastrophizing scores. More specifically, participants under treatment reported more depressive symptoms (m = 1.85, sd = 1.51) and anxiety symptoms (m = 2.49, sd = 1.51) than

Table 10. *Descriptive statistics and ANOVA results for place of stay*

		M	*SD*	*F*(3, 506)
Rumination				.38
	Dorm	15.05	3.01	
	With Family	14.95	3.23	
	With Friends	15.11	3.11	
	Other	15.45	2.73	
Thought suppression				6.02***
	Dorm	51.20	10.23	
	With Family	47.80	11.05	
	With Friends	50.38	11.66	
	Other	45.16	11.62	
Catastrophizing				4.03**
	Dorm	9.09	3.24	
	With Family	8.74	3.32	
	With Friends	9.72	3.16	
	Other	7.97	2.85	
Depression				1.85
	Dorm	.98	1.09	
	With Family	.84	1.23	
	With Friends	1.15	1.17	
	Other	.82	1.15	
Anxiety				.27
	Dorm	1.44	1.38	
	With Family	1.45	1.25	
	With Friends	1.58	1.3	
	Other	1.44	1.43	
NSSI				1.99
	Dorm	.52	.73	
	With Family	.43	.71	
	With Friends	.67	.83	
Bulimia	Other	.54	.73	3.68*
	Dorm	2.12	1.92	
	With Family	1.54	1.71	
	With Friends	1.86	2.03	
	Other	1.47	1.54	
Reassurance Seeking				5.61**
	Dorm	13.01	4.98	
	With Family	11.26	5.24	
	With Friends	12.61	5.47	
	Other	10.48	5.01	
Drink to cope				2.47
	Dorm	9.31	4.88	
	With Family	8.72	4.65	
	With Friends	10.15	5.35	
	Other	10.31	4.85	

Note. *$p < .05$, **$p < .01$, *** $p < .001$.

Table 11. *Descriptive statistics and t-test results for past treatment history.*

		M	*SD*	*t*(398)
Rumination				2.38**
	Treatment	15.81	2.72	
	No treatment	14.93	3.11	
Thought suppression				6.02***
	Treatment	51.26	10.37	
	No treatment	48.92	11.21	
Catastrophizing				3.13**
	Treatment	10.00	3.22	
	No treatment	8.78	3.21	
Depression				3.10**
	Treatment	1.31	1.31	
	No treatment	.88	1.12	
Anxiety				3.96***
	Treatment	2.00	1.43	
	No treatment	1.37	1.28	
NSSI				1.33
	Treatment	.62	.77	
	No treatment	.51	.74	
Bulimia				1.18
	Treatment	2.04	2.09	
	No treatment	1.77	1.80	
Reassurance Seeking				3.44**
	Treatment	13.91	5.77	
	No treatment	11.75	5.06	
Drink to cope				2.70**
	Treatment	10.75	5.56	
	No treatment	9.15	4.76	

Note. *$p < .05$, **$p < .01$, *** $p < .001$

Table 12. *Descriptive statistics and t-test results for current treatment status.*

		M	*SD*	*t*(398)
Rumination				2.45*
	Treatment	16.70	2.05	
	No treatment	14.99	3.07	
Thought suppression				1.35
	Treatment	52.75	11.06	
	No treatment	49.33	10.99	
Catastrophizing				2.50*
	Treatment	10.70	3.99	
	No treatment	8.87	3.13	
Depression				3.68***
	Treatment	1.85	1.51	
	No treatment	.91	1.10	
Anxiety				3.40**
	Treatment	2.48	1.51	
	No treatment	1.47	1.28	
NSSI				2.69**
	Treatment	.94	.98	
	No treatment	.49	.71	
Bulimia				-.31
	Treatment	1.74	1.91	
	No treatment	1.87	1.85	
Reassurance Seeking				2.74**
	Treatment	15.35	6.02	
	No treatment	12.18	4.99	
Drink to cope				2.47*
	Treatment	12.10	5.38	
	No treatment	9.31	4.89	

Note. *$p < .05$, **$p < .01$, *** $p < .001$

participants who are not (m = 0.91, sd = 1.10; m = 1.47, sd = 1.28), t(398) = 3.68, p < .001 and t(398) = 3.40, p < .01, respectively. In addition, participants who receive treatment had higher drinking to cope scores (m = 12.1, sd = 5.38) than participants who do not receive treatment (m = 9.31, sd = 4.89), t(398) = 2.47, p < .05. They also reported engaging in more excessive reassurance-seeking (m = 15.35, sd = 6.02) compared to participants who are not under treatment (m = 12.18, sd = 4.99), t(398) = 2.74, p < .01. Lastly, participants who are under treatment reported more catastrophizing (m = 10.70, sd = 3.99) and rumination (m = 16.7, sd = 2.06) than participants who are not (m = 8.87, sd = 3.13; m = 14.99, sd = 3.07), t(398) = 2.50, p < .05 and t(505) = 2.46, p < .05, respectively.

8.2. Measurement Model Analyses

Before testing the structural model, preliminary measurement analyses were conducted to test if variables hypothesized to indicate latent variables (i.e., emotional cascades and behavioral dysregulation) would fit well together. Factor loadings of the measurement model are presented in Table 13.

The emotional cascades latent variable was comprised of three variables; which are rumination, catastrophizing, and thought suppression. Measurement analysis showed that emotional cascades latent variable fit the data well, $\chi^2(1, N = 507) = 0.47$, $p > .05$, $\chi^2/df = .47$. All three variables had significant loadings on to the emotional cascades latent variable (p < .001), with standardized factor loadings .60, .60, and .32 for thought suppression, catastrophizing, and rumination, respectively.

Behavioral dysregulation latent variable was comprised of NSSI, bulimic symptoms, excessive reassurance-seeking, and drinking to cope variables. Although these variables do seem like separate dysfunctional behaviors that are different from each other, all of them were argued to function as a way to escape from intense negative affect. The fit of these behaviors on to the behavioral dysregulation construct was examined.

Preliminary measurement analysis indicated that behavioral dysregulation latent variable fit the data well, $\chi^2(2, N = 507) = .45$, $p > .05$, $\chi^2/df = .22$. All four variables significantly loaded onto the behavioral dysregulation latent variable ($p < .001$), with standard factor loadings .55, .44, .33, and .34 for NSSI, bulimia, excessive reassurance-seeking, and drink to cope, respectively.

Table 13. *Factor Loadings of the Measurement Model*

Observed Variable	Latent Variable	Factor Loading
Rumination	← Emotional cascades	.32
Catastrophizing	←Emotional cascades	.60
Thought suppression	←Emotional cascades	.60
Bulimia	← Behavioral Dysregulation	.44
NSSI	← Behavioral Dysregulation	.55
Drink to cope	← Behavioral Dysregulation	.34
Reassurance Seeking	← Behavioral Dysregulation	.33

An additional latent variable, current psychological distress, was also created, which consisted of anxiety and depressive symptoms. This variable was added in the model as a control variable, to demonstrate that the effect of emotional cascades on dysregulated behaviors was not solely due to the recent psychological distress that the participants had been experiencing.

8.3. Structural Model Analyses

In order to evaluate the fit of the data to the overall model, the maximum likelihood chi-square statistic (χ^2) was used. The χ^2 assesses the discrepancy

between the actual data and the hypothesized model. Thus, a significant χ^2 represents a lack of fit (Hu & Bentler, 1999). Because χ^2 is sensitive to large sample sizes (Tabachnik & Fidel, 2007), additional fit indices were used to test the model fit, including the comparative fit index (CFI), the root-mean square error of approximation (RMSEA), and the standardized root-mean residual (SRMR). According to Hu and Bentler (1999), the suggested cut-off points for these fit statistics are ≥ .95 for CFI, < .06 for RMSEA, and < .08 for SRMR.

At the first step, the proposed model demonstrating the relationship between emotional cascades and behavioral dysregulation was tested. In this partial model, a direct effect was hypothesized from emotional cascades latent variable to the behavioral dysregulation (See Figure 4). SEM analysis indicated that this model exhibited a good fit, $\chi^2(13, N = 507) = 20.9$, $p>.05$, $\chi^2/df = 1.61$, CFI = .97, RMSEA = .035, SRMR = .03; and emotional cascades significantly predicted dysregulated behaviors ($p < .001$) with a standardized regression weight of .90.

Next, current psychological distress was added into the model as a control variable (See Figure 5). SEM analysis testing the fit of this model indicated a good fit, $\chi^2(24, N = 507) = 34.05$, $p> .05$, $\chi^2/df = 1.42$, CFI = .99, RMSEA = .029, SRMR = .031. Current psychological distress significantly predicted emotional cascades ($p < .001$) and dysregulated behaviors ($p < .01$). However, the relationship between emotional cascades and dysregulated behaviors did fail to remain significant ($p > .05$) after the effect of current psychological distress on dysregulated behaviors was controlled for. Standardized regression weights for the structural model are presented in Table 14.

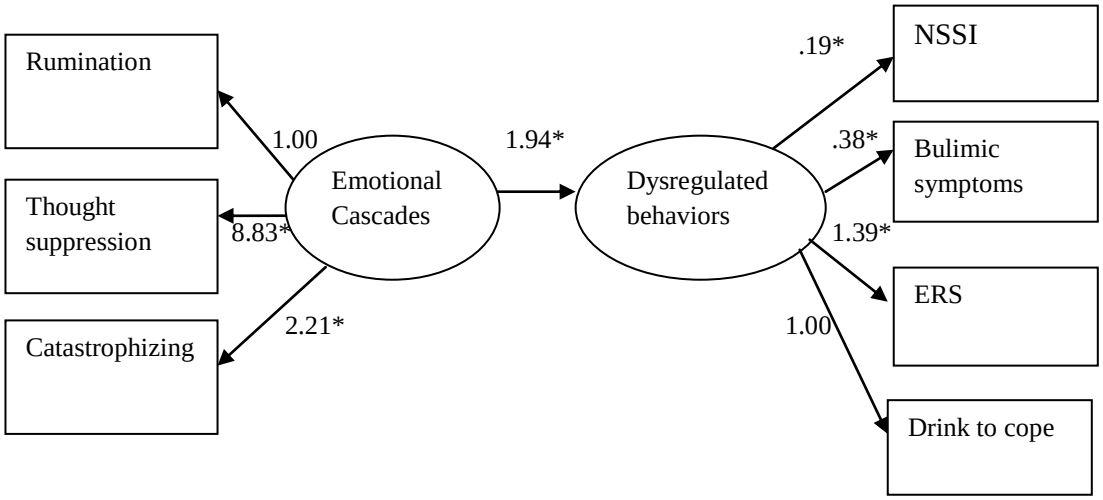

Figure 4. *Unstandardized factor loadings for the partial structural model demonstrating the hypothesized relationship between emotional cascades and dysregulated behaviors.*

Note. * $p < .001$

Table 14. *Factor loadings of the full structural model*

Predictor		Outcome Variable	Standardized Regression Weight
Emotional cascades	→	Behavioral Dysregulation	.15
Current psychological distress	→	Emotional cascades	.86
Current psychological distress	→	Behavioral Dysregulation	.85
Emotional Cascades	→	Rumination	.26
Emotional Cascades	→	Thought suppression	.63
Emotional Cascades	→	Catastrophizing	.57
Behavioral dysregulation	→	NSSI	.51
Behavioral dysregulation	→	Excessive reassurance seeking	.40
Behavioral dysregulation	→	Drink to cope	.40
Behavioral dysregulation	→	Bulimic symptoms	.33
Current psychological distress	→	Anxiety	.69
Current psychological distress	→	Depression	.77

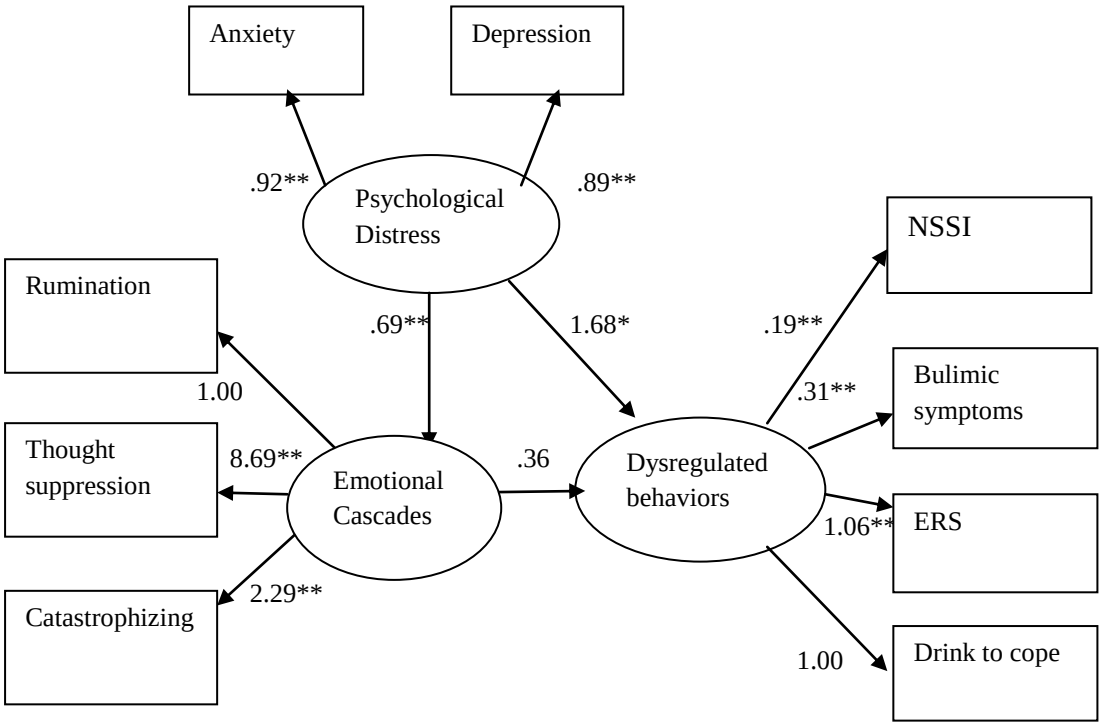

Figure 5. *Unstandardized factor loadings for the full structural model demonstrating the hypothesized relationship between emotional cascades and dysregulated behaviors, controlled for current psychological distress.*

Note 1. ERS: Excessive reassurance-seeking
Note 2. * $p < .01$, ** $p < .001$.

CHAPTER 9

DISCUSSION OF THE STUDY 2

The aim of Study 2 was to test the unifying role of ruminative processes on various dysregulated behaviors. Accordingly, the framework of the emotional cascade model was used to test the assumption that ruminative processes are associated with dysregulated behaviors, even when the effect of current psychological distress was controlled for. The results of the structural equation modeling showed that emotional cascades construct, which is comprised of rumination, catastrophizing, and thought suppression, was indeed related to behavioral dysregulation, a construct indicated by NSSI, bulimic symptoms, excessive reassurance-seeking, and drinking to cope. However, this relationship did not remain significant when the effects of current anxiety and depressive symptoms on behavioral dysregulation were controlled for.

The findings of the present study has added to the preliminary evidence supporting the emotional cascade model, which is a relatively new and promising model unifying findings derived from different theories on emotional and behavioral dysregulation. The majority of the previous studies in the literature have investigated cognitive emotion regulation strategies and various maladaptive behaviors in separate studies. Supporting, although partially, previous studies on emotional cascades (e.g., Selby et al., 2009), the current evidence suggests that the link between emotional and behavioral dysregulation may be through ruminative processes.

One of the interesting findings of this study was that impulsive and dysfunctional behaviors that seem completely unrelated to each other fit together well enough to create the latent variable of behavioral dysregulation. This finding can be considered as preliminary evidence suggesting that various dysregulated

behaviors may have a common underlying mechanism (Selby, 2007), which is ruminative processes in the current context.

As opposed to the previous studies (e.g., Selby, 2007), the relationship between ruminative processes and dysregulated behaviors was not statistically significant when the effect of current psychological distress (as indicated by anxiety and depressive symptoms) was controlled for. This may be due to the significant positive correlations between the measures of behavioral dysregulation and measures of psychological distress, as well as a lack of significant correlations between rumination (as assessed by the CERQ) and some of the dysregulated behaviors such as NSSI and bulimia. As opposed to our expectations, rumination variable did not correlate well with certain symptoms patterns in the current sample. Previous studies consistently showed that a ruminative response style is related to bulimic symptoms (e.g., Nolen-Hoeksema, et al., 2007), drinking (e.g., Caselli et al., 2010), NSSI (Hilt et al., 2008), and excessive reassurance-seeking (e.g., Weinstock & Whisman, 2007). In contrast, rumination variable did not correlate with NSSI and bulimic symptoms in our sample. This may be due to a problem in the measurement of ruminative styles in the present study. We used the rumination subscale of the CERQ, which consists of only four items. Additional measures can be used similar to the ones in previous studies such as the Anger Rumination Scale (Sukhodolsky, Golub, & Cromwell, 2001) to have a better grasp of rumination as a construct. Another possible explanation for the lack of correlation between rumination and NSSI may be the unstandardized index we have used to measure NSSI. This index was created by the author for this study, and it is neither a reliable nor a valid measure of NSSI as opposed to the measures used in previous studies.

One of the strengths of the present study is that thought suppression, which is a construct that may seem to be as the opposite of rumination, is in fact found to be closely related to the ruminative processes. In their study Selby and colleagues (2008) argued that thought suppression may be a variable that interacts with rumination and plays a role in the development of emotional cascades; although

this suggestion was yet to be tested. Based on this argument, the present study was first to include a measure of thought suppression among the emotional cascade measures. As predicted, though suppression fit well with rumination and catastrophizing to create the latent variable of emotional cascades, and had significant positive correlations with other emotional cascades measures ($p < .01$). Furthermore, thought suppression had significant positive correlations with *all* symptom patterns ($p < .01$); including bulimic symptoms, drinking to cope, excessive reassurance-seeking, and NSSI. Based on these results, thought suppression seems to be a cognitive emotion regulation strategy that plays an important role in the development of emotional cascades, and contributes to behavioral dysregulation. We find this result important because it provides us with a better understanding of emotional cascades as a construct.

For the current sample, both rumination and thought suppression significantly correlated with anxiety and depressive symptoms, as well as dysfunctional behaviors such as drinking to cope and excessive reassurance-seeking. These findings suggested that neither excessive rumination nor excessive control of one's thoughts is functional. As suggested by Nolen-Hoeksema and Jackson (2001), the evidence from the present study indicated that a balance may be necessary between the control of and attention to negative emotions for a healthy psychological functioning.

The results of the current study showed that there was a gender difference on rumination as assessed by the CERQ. This finding was expected given the previous studies that have found that females score higher than males on measures of rumination (Nolen-Hoeksema & Jackson, 2001). For example, Butler and Nolen-Hoeksema (1994) showed that female participants in a depressed mood have a higher tendency to focus on their mood than male participants. In their study of the mediators of rumination, Nolen-Hoeksema and Jackson (2001) tried to explain this gender difference on ruminative response style. Their results showed that women believe more than men that negative emotions are more

difficult to control, and this belief contributes to their relatively higher tendency to ruminate.

We believe that the present study will provide important contributions to the emotion regulation literature in Turkey. Although rumination has gained considerable attention in the literature, there exists only a few numbers of published studies that is based on Turkish samples. Furthermore, to our knowledge, the relationship between cognitive emotion regulation strategies and maladaptive behaviors was also yet to be investigated in Turkish population. Thus, the present study has not only contributed to the research on emotional and behavioral dysregulation in Turkey, but also it may provide important directions for future research in Turkish emotion regulation literature.

The results of the present study may have several clinical implications. Our results showed that dysregulated behaviors that seem very different are in fact related to each other, and may have very similar underlying processes. Having a better understanding of these underlying mechanisms can help us to develop integrative intervention techniques that may work for a variety of dysfunctional, impulsive behaviors which are very common across psychological disorders. If supported with future evidence, the emotional cascade model might provide us a common mechanism of change for a wide range of dysregulated behaviors; that is the prevention and reduction of the ruminative processes. From this common ground, effective interventions can be developed and used in psychotherapy in order to help individuals shift their attention from ruminative thoughts and to interfere the interplay between rumination and negative affect. Instead of focusing on the negative feelings and entering the repetitive cycle of rumination, individuals can learn to find alternative, more functional ways of coping, which may prevent impulsive and self-destructive behaviors such as NSSI. Educating the patients about the occurrence and results of the emotional cascades; and teaching them to use alternative methods of coping may help to prevent individuals from entering emotional cascades and engaging in dysregulated behaviors.

There is some evidence in support for the effectiveness of mindfulness techniques in reducing rumination (Selby & Joiner, 2009). For example, Ramel, Goldin, Carmona, and McQuaid (2004) showed that practicing Mindfulness Based Stress Reduction (Kabat-Zinn, 1982) over an 8-week period decreases rumination in patients with past depression, even when controlled for changes in negative affect and dysfunctional thinking. Accordingly, as an alternative to dysregulated behaviors and a more functional coping strategy with negative affect, mindfulness-based exercises may be advanced and applied to prevent a wide range of maladaptive, impulsive behaviors.

There were some limitations of the present study that deserve to be noted. To begin with, because the collected data were cross-sectional, thus the relationships demonstrated between rumination and dysregulated behaviors do not imply causality. Future studies are suggested to use a longitudinal design to investigate the possible predictive and/or temporal role of ruminative processes in the development of dysregulated behaviors.

There were other limitations of the present study regarding the generalizability of the results. First, the current sample was comprised predominantly of female participants, which limits the generalizability of the results to the general population. Accordingly, we suggest future studies to have a more balanced male-female ratio in their sample. Furthermore, the current sample was selected from university students. Thus, our sample was not representative of the general Turkish population. Future studies are recommended to recruit a more randomized sample, and to test the emotional cascade model in clinical, as well as non-clinical samples.

Another problem with generalizability was the fact that while creating behavioral dysregulation latent variable; only four behaviors were selected among many others. This may limit the generalizability of the results to other dysregulated behaviors such as suicide attempts. Thus, future studies are

suggested to test the emotional cascade model using additional dysregulated behaviors.

Lastly, the comparisons among demographic groups on study variables should be interpreted with caution because of the uneven cell sizes within demographic groups. Future studies may sample equal number of participants to each demographic category in order to make meaningful comparisons.

In conclusion, the aim of the study was to understand the role of ruminative processes in dysregulated behaviors. We tested the role of ruminative processes in dysregulated behaviors using structural equation modeling. Our results showed that various dysregulated behaviors may have common underlying mechanisms, which is a finding that can be used to develop integrative interventions for a variety of dysfunctional behaviors.

CHAPTER 10

CONCLUSION

The purpose of this study was to investigate the role of cognitive emotion regulation strategies on dysregulated behaviors in a sample of Turkish university students. Our review of the literature pointed to the need for a measure of cognitive emotion regulation strategies in Turkish. Accordingly, the first part of the study successfully translated and adapted the Cognitive Emotion Regulation Questionnaire (CERQ; Garnefski et al., 2001) into Turkish, which is a common measure of cognitive coping strategies. The Turkish version of the CERQ was found to be a reliable and valid measure with psychometric properties comparable to the original measure. In the second part of the study, the relationship between ruminative processes (i.e., rumination, catastrophizing, thought suppression) and dysregulated behaviors (i.e., NSSI, drinking to cope, bulimic symptoms, excessive reassurance-seeking) was tested within the framework of emotional cascade model. Using structural equation modeling, it was shown that there was a relationship between ruminative processes and behavioral dysregulation; although this relationship was not significant when the effect of current psychological distress on behavioral dysregulation was controlled for.

We believe that this study has important contributions to the emotion regulation and, in general, to the psychology literature in Turkey. First and foremost, there was a certain need for a reliable and valid measure of cognitive emotion regulation strategies in Turkish. The only measures of emotion regulation we have found in Turkish were the Turkish version of the Difficulties in Emotion Regulation Questionnaire (Rugancı & Gençöz, 2010) and a short version of the CERQ (Çakmak & Çevik, 2011). Thus, with the development of the Turkish version of the CERQ, we believe that the research on emotion regulation,

specifically on the cognitive aspect of emotion regulation, in Turkish population will be facilitated.

Furthermore, this was the first study to test the emotional cascade model in a Turkish sample, and was also the first study in Turkey to investigate the relationship between ruminative processes and various dysregulated behaviors. Similar to previous studies, the findings of the current study supported that a variety of dysregulated behaviors that seem different may share similar processes. With its integrative nature, we believe that the present study may help to enhance our understanding of mechanisms underlying a variety of dysregulated behaviors.

The current study also has some clinical implications. Study 1 showed that certain cognitive emotion regulation strategies appear to be related to higher functionality; whereas others appear to be associated with psychopathology and lower psychological well-being. Based on this finding, interventions can be developed to help people use more adaptive cognitive coping strategies. Furthermore, findings of Study 2 can be used to educate individuals about the negative consequences of rumination, and to help them develop alternative behaviors to cope with negative affect.

In closing, the current study revealed that cognitive emotion regulation strategies are closely related to psychological problems, more specifically dysfunctional behaviors that are difficult to control such as NSSI. We believe that the findings of this study will contribute to the emotion regulation literature in Turkey and may be used to develop interventions that target a variety of dysregulated behaviors.

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APPENDICES

APPENDIX A

DEMOGRAPHIC INFORMATION FORM

1. Yaşınız:_____

2. Cinsiyetiniz: Kadın ( ) Erkek ( )

3. Medeni durumunuz: Evli ( ) Bekar ( ) Boşanmış-Ayrı ( ) Dul ( )

4. Okulunuz:_____

5. Bölümünüz: _____

6. Seviyeniz: ( ) Lisans ( ) Yüksek lisans ( ) Doktora

7. Üniversite eğitiminizi sürdürürken kaldığınız yer?
( ) Ailemle
( ) Arkadaşlarla evde
( ) Yurtta
( ) Akraba yanında
( ) Tek başına evde
( ) Erkek/kız arkadaşımla evde
Diğer_____(belirtiniz)

9. Kendinizi hangi gelir düzeyinde tanımlarsınız?
Düşük ( )
Orta ( )
Yüksek ( )
Çok Yüksek ( )

10. Yaşamınızın büyük kısmını nerede geçirdiniz?
( ) Köy
( ) Kasaba
( ) İlçe
( ) Şehir
( ) Büyükşehir

11. Daha önce hiç tedavi gerektiren bir psikolojik rahatsızlık geçirdiniz mi?
Evet ( ) Hayır ( )

Evet ise, nedir? _____

12. Şu anda herhangi bir psikolojik rahatsızlık sebebiyle tedavi (ilaç, danışmanlık, terapi vb.) görüyor musunuz?
Evet ( ) Hayır ( )

CERQ

Olaylarla nasıl başa çıkarsınız? Herkes zaman zaman olumsuz ya da tatsız olaylarla karşılaşır ve herkes bu olaylara kendi yöntemiyle tepki verir. Lütfen aşağıdaki soruları cevaplayarak olumsuz ya da tatsız olaylar yaşadığınızda genel olarak ne düşündüğünüzü belirtiniz.

	(neredeyse) Hiçbir zaman	**Nadiren**	**Bazen**	**Sık sık**	**(neredeyse) Her zaman**
1. Suçlanacak kişinin ben olduğumu düşünürüm.	1	2	3	4	5
2. Olanları kabul etmek zorunda olduğumu düşünürüm.	1	2	3	4	5
3. Sık sık, yaşadığım olayla ilgili ne hissettiğim hakkında düşünürüm.	1	2	3	4	5
4. Yaşadığım şeyden daha güzel şeyler düşünürüm.	1	2	3	4	5
5. Yapabileceğimin en iyisinin ne olduğunu düşünürüm.	1	2	3	4	5
6. Bu durumdan bir şeyler öğrenebileceğimi düşünürüm.	1	2	3	4	5
7. "Her şey çok daha kötü olabilirdi" diye düşünürüm.	1	2	3	4	5
8. Sık sık, yaşadığım olayın diğer insanların başına gelen olaylardan çok daha kötü olduğunu düşünürüm.	1	2	3	4	5
9. Suçlanacak kişinin başkaları olduğunu düşünürüm.	1	2	3	4	5
10. Olanlardan sorumlu olan kişinin kendim olduğunu düşünürüm.	1	2	3	4	5
11. Durumu kabul etmem gerektiğini düşünürüm.	1	2	3	4	5
12. Zihnim yaşadığım olayla ilgili ne düşündüğüm ve ne hissettiğimle meşgul olur.	1	2	3	4	5
13. Yaşadığım olayla ilgisi olmayan güzel şeyler düşünürüm.	1	2	3	4	5
14. Bu durumla en iyi nasıl başa çıkabileceğimi düşünürüm.	1	2	3	4	5
15. Olanların sonucunda daha güçlü bir insan olabileceğimi düşünürüm.	1	2	3	4	5
16. Diğer insanların başından çok daha kötü şeyler geçtiğini düşünürüm.	1	2	3	4	5
17. Yaşadığım şeyin ne kadar korkunç bir şey olduğunu düşünür dururum.	1	2	3	4	5
18. Olanlardan başkalarının sorumlu olduğunu düşünürüm.	1	2	3	4	5
19. Durumla ilgili yaptığım hatalar hakkında düşünürüm.	1	2	3	4	5

	(neredeyse) Hiçbir zaman	**Nadiren**	**Bazen**	**Sık sık**	**(neredeyse) Her zaman**
20. Durumla ilgili hiçbir şeyi değiştiremeyeceğimi düşünürüm.	1	2	3	4	5
21. Yaşadığım olayla ilgili neden bu şekilde hissettiğimi anlamak isterim.	1	2	3	4	5
22. Olanları düşünmek yerine güzel bir şey düşünürüm.	1	2	3	4	5
23. Durumu nasıl değiştirebileceğimi düşünürüm.	1	2	3	4	5
24. Durumun olumlu yanları da olduğunu düşünürüm.	1	2	3	4	5
25. Diğer şeylerle karşılaştırıldığında yaşadığım şeyin o kadar da kötü olmadığını düşünürüm.	1	2	3	4	5
26. Sık sık, yaşadığım durumun bir insanın başına gelebilecek en kötü durum olduğunu düşünürüm.	1	2	3	4	5
27. Durumla ilgili başkalarının yaptığı hataları düşünürüm.	1	2	3	4	5
28. Temelde durum bizzat benden kaynaklanmış olmalı diye düşünürüm.	1	2	3	4	5
29. Bu durumla yaşamayı öğrenmem gerektiğini düşünürüm.	1	2	3	4	5
30. Durumun bende uyandırdığı duygular üzerine kafa yorarım.	1	2	3	4	5
31. Yaşadığım güzel şeyler hakkında düşünürüm.	1	2	3	4	5
32. Duruma dair yapabileceğim en iyi şeyi planlarım.	1	2	3	4	5
33. Durumun olumlu yönlerini bulmaya çalışırım.	1	2	3	4	5
34. Kendime hayatta bundan daha kötü şeylerin olduğunu söylerim.	1	2	3	4	5
35. Sürekli bu durumun ne kadar berbat olduğunu düşünür dururum.	1	2	3	4	5
36. Sorunun temelinde diğer insanların yattığını düşünürüm.	1	2	3	4	5

WHITE BEAR SUPPRESSION INVENTORY

Aşağıda bazı düşünce ve davranışlara ilişkin ifadeler yer almaktadır. Lütfen her bir ifadeyi dikkatle okuduktan sonra bu ifadeye ne kadar katıldığınızı yanındaki harflerden uygun olanı yuvarlak içine alarak belirtiniz. Doğru ya da yanlış cevap yoktur. Hiçbir maddeyi boş bırakmamaya özen gösteriniz.

A	B	C	D	E
Kesinlikle Katılmıyorum	Katılmıyorum	Fikrim Yok ya da Bilmiyorum	Katılıyorum	Kesinlikle Katılıyorum

1. Bazı şeyleri düşünmemeyi tercih ederim	A B C D E
2. Bazen düşündüğüm şeyleri neden düşündüğümü merak ederim.	A B C D E
3. Kendimi düşünmekten alıkoyamadığım düşüncelerim var.	A B C D E
4. Aklıma geliveren ve bir türlü kurtulamadığım imgeler/görüntüler var.	A B C D E
5. Dönüp dolaşıp yine aynı şeyi düşünüyorum.	A B C D E
6. Keşke bazı şeyleri düşünmekten vazgeçebilsem	A B C D E
7. Bazen düşüncelerim o kadar hızlı değişiyor ki onları durdurmak istiyorum	A B C D E
8. Her zaman sorunları aklımdan çıkarmaya çalışırım	A B C D E
9. İstemeden birden bire aklıma gelen düşünceler var	A B C D E
10. Düşünmemeye çalıştığım bazı şeyler var.	A B C D E
11. Bazen gerçekten aklımdakileri düşünmekten vazgeçebilsem diyorum.	A B C D E
12. Sık sık kendimi düşüncelerimden uzaklaştıracak şeyler yaparım.	A B C D E
13. Uzaklaşmaya çalıştığım düşüncelerim var	A B C D E
14. Kimseye söylemediğim bir sürü düşüncem var.	A B C D E
15. Bazen bazı düşüncelerin zihnimi meşgul etmesini önlemek için başka şeylerle uğraşırım	A B C D E

REASSURANCE SEEKING SCALE

Aşağıdaki sorular için aşağıdaki ölçeği kullanarak sizin için en uygun olan rakamı işaretleyiniz.

1) Hayır, hiç 2) Hayır, nadiren 3) Pek değil
4) Emin değilim 5) Evet, bazen 6) Evet, sıklıkla 7)Evet, çok sık

1) Genel olarak, yakın hissettiğiniz insanlara, sizin hakkınızda gerçekten ne hissettiklerini sorarken kendinizi sık sık yakalar mısınız?

1 2 3 4 5 6 7

2) Genel olarak, yakın hissettiğiniz insanlardan sizinle gerçekten ilgilendiklerine dair sık sık güvence arar mısınız?

1 2 3 4 5 6 7

3) Genel olarak, yakın hissettiğiniz kişiler, onların sizinle gerçekten ilgilendiklerine dair güvence aramanızdan bazen rahatsız olurlar mı?

1 2 3 4 5 6 7

4) Genel olarak, yakın hissettiğiniz kişilerin, onların sizinle gerçekten ilgilendiklerine dair güvence aramanızdan "bıktıkları" olur mu?

1 2 3 4 5 6 7

EDE-Q (Binge eating dimension)

Aşağıdaki sorular sadece son 4 hafta ile ilgilidir. Lütfen her soruyu dikkatlice okuyunuz ve tüm soruları yanıtlayınız. Teşekkürler.

Son dört hafta içinde (28 gün)…

Son 28 gün içinde, kaç kere, başka insanların alışılmadık miktarda fazla (şartlara göre) olarak tanımlayacakları biçimde yemek yediniz?
…….

Bu süre içinde kaç kere yemek yemenizle ilgili kontrolü kaybetme hissine kapıldınız (yediğiniz sırada)?
…….

Son 28 günün kaç **GÜNÜNDE** aşırı yemek yeme nöbetleri ortaya çıktı (örn. Alışılmadık miktarda fazla yemek yediğiniz ve o sırada kontrolü kaybettiğiniz duygusunu yaşadınız)?
…….

Son 28 gün içinde, bedeninizin şekli ya da kilonuzu kontrol amacıyla, kaç kere kendinizi kusturdunuz?
…….

Son 28 gün içinde, bedeninizin şekli ya da kilonuzu kontrol amacıyla, kaç kere müshil (bağırsak çalıştırıcı) kullandınız?
…….

Son 28 gün içinde, kilonuzu, bedeninizin şeklini ya da yağ miktarınızı kontrol etmek, kalorileri yakmak amacıyla, kaç kere "kendinizi kaybedercesine" ya da "saplantılı" biçimde egzersiz yaptınız? …….

BRIEF SYMPTOM INVENTORY

Aşağıda insanların bazen yaşadıkları belirtilerin ve yakınmaların bir listesi verilmiştir. Listedeki her maddeyi lütfen dikkatle okuyun. Daha sonra o belirtinin **SİZDE BUGÜN DAHİL, SON BİR HAFTADIR NE KADAR VAR OLDUĞUNU** yandaki bölmede uygun olan yere işaretleyin. Her belirti için sadece bir yeri işaretlemeye ve hiçbir maddeyi atlamamaya özen gösterin. Eğer fikir değiştirirseniz ilk yanıtınızı silin. Yanıtlarınızı aşağıdaki ölçeğe göre değerlendirin:

Bu belirtiler son bir haftadır sizde ne kadar var?

0. Hiç yok
1. Biraz var
2. Orta derecede var
3. Epey var
4. Çok fazla var

	Hiç	Biraz	Orta	Epey	Çok fazla
1. İçinizdeki sinirlilik ve titreme hali					
2. Baygınlık, baş dönmesi					
3. Bir başka kişinin sizin düşüncelerinizi kontrol edeceği fikri					
4. Başınıza gelen sıkıntılardan dolayı başkalarının suçlu olduğu duygusu					
5. Olayları hatırlamada güçlük					
6. Çok kolayca kızıp öfkelenme					
7. Göğüs (kalp) bölgesinde ağrılar					
8. Meydanlık (açık) yerlerden korkma duygusu					
9. Yaşamınıza son verme düşünceleri					
10. İnsanların çoğuna güvenilemeyeceği hissi					
11. İştahta bozukluklar					
12. Hiçbir nedeni olmayan ani korkular					
13. Kontrol edemediğiniz duygu patlamaları					
14. Başka insanlarla beraberken bile yalnızlık hissetmek					
15. İşleri bitirme konusunda kendini engellenmiş hissetmek					
16. Yalnız hissetmek					
17. Hüzünlü, kederli hissetmek					
18. Hiçbir şeye ilgi duymamak					
19. Ağlamaklı hissetmek					
20. Kolayca incinebilme, kırılmak					
21. İnsanların sizi sevmediğine, kötü davrandığına inanmak					
22. Kendini diğerlerinden daha aşağı görme					
23. Mide bozukluğu, bulantı					
24. Diğerlerinin sizi gözlediği ya da hakkınızda konuştuğu duygusu					
25. Uykuya dalmada güçlükler					
26. Yaptığınız şeyleri tekrar tekrar doğru mu diye kontrol etmek					
27. Karar vermede güçlükler					
28. Otobüs, tren, metro gibi umumi vasıtalarla seyahatlerden korkmak					
29. Nefes darlığı, nefessiz kalmak					

30. Sıcak soğuk basmaları					
31. Sizi korkuttuğu için bazı eşya, yer yada etkinliklerden uzak kalmaya çalışmak					
32. Kafanızın 'bomboş' kalması					
33. Bedeninizin bazı bölgelerinde uyuşmalar, karıncalanmalar					
34. Günahlarınız için cezalandırılmanız gerektiği					
35. Gelecekle ilgili umutsuzluk duyguları					
36. Konsantrasyonda (dikkati bir şey üzerinde toplama) güçlük/zorlanmak					
37. Bedenin bazı bölgelerinde zayıflık, güçsüzlük hissi					
38. Kendini gergin ve tedirgin hissetmek					
39. Ölme ve ölüm üzerine düşünceler					
40. Birini dövme, ona zarar verme, yaralama isteği					
41. Bir şeyleri kırma, dökme isteği					
42. Diğerlerinin yanındayken yanlış bir şeyler yapmamaya çalışmak					
43. Kalabalıklarda rahatsızlık duymak					
44. Bir başka insana hiç yakınlık duymamak					
45. Dehşet ve panik nöbetleri					
46. Sık sık tartışmaya girmek					
47. Yalnız bırakıldığında / kalındığında sinirlilik hissetmek					
48. Başarılarınız için diğerlerinden yeterince takdir görmemek					
49. Yerinde duramayacak kadar tedirgin hissetmek					
50. Kendini değersiz görmek/ değersizlik duyguları					
51. Eğer izin verirseniz insanların sizi sömüreceği duygusu					
52. Suçluluk duyguları					
53. Aklınızda bir bozukluk olduğu fikri					

WAYS OF COPING SCALE

Aşağıda, önemli olabilecek olaylar karşısında kişilerin davranış, düşünce ve tutumlarını belirten bazı cümleler verilmiştir. Lütfen her cümleyi dikkatle okuyunuz. Yaşamınızda karşılaştığınız sorunlarla başa çıkmak için, bu cümlelerde anlatılanları ne sıklıkla kullandığınızı size uygun gelen kutuyu (X) ile işaretleyiniz. Hiçbir cümleyi cevapsız bırakmamaya çalışınız. Her cümle ile ilgili yalnız bir cevap kategorisini işaretleyiniz.

	Hiç uygun degil	Pek uygun degil	Uygun	Oldukça uygun	Çok uygun
1. Aklımı kurcalayan şeylerden kurtulmak için değişik işlerle uğraşırım					
2. Bir sıkıntım olduğunu kimsenin bilmesini istemem					
3. Bir mucize olmasını beklerim					
4. İyimser olmaya çalışırım					
5. "Bunu da atlatırsam sırtım yere gelmez" diye düşünürüm					
6. Çevremdeki insanlardan problemi çözmede bana yardımcı olmalarını beklerim					
7. Bazı şeyleri büyütmemeye üzerinde durmamaya çalışırım					
8. Sakin kafayla düşünmeye ve öfkelenmemeye çalışırım					
9. Bu sıkıntılı dönem bir an önce geçsin isterim					
10. Olayın değerlendirmesini yaparak en iyi kararı vermeye çalışırım					
11. Konuyla ilgili olarak başkalarının ne düşündüğünü anlamaya çalışırım					
12. Problemin kendiliğinden hallolacağına inanırım					
13. Ne olursa olsun kendime direnme ve mücadele etme gücü hissederim					
14. Başkalarının rahatlamama yardımcı olmalarını beklerim					
15. Kendime karsı hoşgörülü olmaya çalışırım					
16. Olanları unutmaya çalışırım					
17. Telaşımı belli etmemeye ve sakin olmaya çalışırım					
18. "Basa gelen çekilir" diye düşünürüm					
19. Problemin ciddiyetini anlamaya çalışırım					
20. Kendimi kapana sıkışmış gibi hissederim					
21. Duygularımı paylaştığım kişilerin bana hak vermesini isterim					
22. Hayatta neyin önemli olduğunu keşfederim					
23. "Her işte bir hayır vardır" diye düşünürüm					
24. Sıkıntılı olduğumda her zamandakinden fazla uyurum					
25. İçinde bulunduğum kötü durumu kimsenin bilmesini istemem					
26. Dua ederek Allah'tan yardım dilerim					
27. Olayı yavaşlatmaya ve böylece kararı ertelemeye çalışırım					

28. Olanla yetinmeye çalışırım					
29. Olanları kafama takıp sürekli düşünmekten kendimi alamam					
30. İçimde tutmaktansa paylaşmayı tercih ederim					
31. Mutlaka bir yol bulabileceğime inanır, bu yolda uğraşırım					
32. Sanki bu bir sorun değilmiş gibi davranırım					
33. Olanlardan kimseye söz etmemeyi tercih ederim					
34. "İş olacağına varır" diye düşünürüm					
35. Neler olabileceğini düşünüp ona göre davranmaya çalışırım					
36. İşin içinden çıkamayınca "elimden bir şey gelmiyor" der, durumu olduğu gibi kabullenirim					
37. İlk anda aklıma gelen kararı uygularım					
38. Ne yapacağıma karar vermeden önce arkadaşlarımın fikrini alırım					
39. Her şeye yeniden başlayacak gücü bulurum					
40. Problemin çözümü için adak adarım					
41. Olaylardan olumlu bir şey çıkarmaya çalışırım					
42. Kırgınlığımı belirtirsem kendimi rahatlamış hissederim					
43. Alın yazısına ve bunun değişmeyeceğine inanırım					
44. Soruna birkaç farklı çözüm yolu ararım					
45. Basıma gelenlerin herkesin başına gelebilecek şeyler olduğuna inanırım					
46. "Olanları keşke değiştirebilseydim" derim					
47. Aile büyüklerine danışmayı tercih ederim					
48. Yaşamla ilgili yeni bir inanç geliştirmeye çalışırım					
49. "Her şeye rağmen elde ettiğim bir kazanç vardır" diye düşünürüm					
50. Gururumu koruyup güçlü görünmeye çalışırım					
51. Bu işin kefaretini (bedelini) ödemeye çalışırım					
52. Problemi adım adım çözmeye çalışırım					
53. Elimden hiçbir şeyin gelmeyeceğine inanırım					
54. Problemin çözümü için bir uzmana danışmanın en iyi yol olacağına inanırım					
55. Problemin çözümü için hocaya okunurum					
56. Her şeyin istediğim gibi olmayacağına inanırım					
57. Bu dertten kurtulayım diye fakir fukaraya sadaka veririm					
58. Ne yapılacağını planlayıp ona göre davranırım					
59. Mücadeleden vazgeçerim					
60. Sorunun benden kaynaklandığını düşünürüm					
61. Olaylar karşısında "kaderim buymuş" derim					
62. Sorunun gerçek nedenini anlayabilmek için başkalarına danışırım					
63. "Keşke daha güçlü bir insan olsaydım" diye düşünürüm					
64. Nazarlık takarak, muska taşıyarak benzer olayların					

olmaması için önlemler alırım					
65. Ne olup bittiğini anlayabilmek için sorunu enine boyuna düşünürüm					
66. “Benim suçum ne” diye düşünürüm					
67. “Allah’ın takdiri buymuş” diye kendimi teselli ederim					
68. Temkinli olmaya ve yanlış yapmamaya çalışırım					
69. Bana destek olabilecek kişilerin varlığını bilmek beni rahatlatır					
70. Çözüm için kendim bir şeyler yapmak istemem					
71. “Hep benim yüzümden oldu” diye düşünürüm					
72. Mutlu olmak için başka yollar ararım					
73. Hakkımı savunabileceğime inanırım					
74. Bir kişi olarak iyi yönde değiştiğimi ve olgunlaştığımı hissederim					

GENERAL SELF-EFFICACY SCALE

Aşağıda herhangi bir durumda insanların nasıl davranacaklarını ve düşüneceklerini ifade eden 19 madde vardır. Lütfen her birini dikkatle okuyarak o maddede yer alan ifadenin size ne derece uygun olduğuna, aşağıdaki puanlamaya bakarak karar veriniz ve ifadenin yanında ayrılan parantezin içinde uygun olan numarayı yazınız.

Sizi hiç tanımlamıyorsa: 1
Sizi biraz tanımlıyorsa: 2
Kararsızsanız: 3
Sizi iyi tanımlıyorsa: 4
Sizi çok iyi tanımlıyorsa: 5

1. ( ) Plan yaptığımda gerçekleştirebileceğimden eminimdir.
2. ( ) Sorunlarımdan biri yapmam gerektiğinde bir türlü işe girişememektir.
3. ( ) Bir işi ilk seferinde yapamasam da yapana kadar denemeye devam ederim.
4. ( ) Yeni arkadaşlar edinmek benim için zordur.
5. ( ) İşleri tamamlamadan bırakırım.
6. ( ) Tanışmak istediğim biri olursa, onun bana gelmesini beklemektense ben ona giderim.
7. ( ) Zorluklarla karşılaşmaktan kaçınırım.
8. ( ) Eğer bir şey çok karmaşık görünüyorsa denemeye bile kalkışmam.
9. ( ) İlginç ama arkadaşlık etmesi zor olan birisiyle tanışırsam, arkadaşlık etme çabalarımı kısa zamanda keserim.
10. ( ) Hoşlanmadığım ama yapmam gereken işler varsa bitirene kadar uğraşırım.
11. ( ) Bir şey yapmaya karar verdiğimde hemen üzerinde çalışmaya başlarım.
12. ( ) Yeni bir şey öğrenmeye çalışırken başlangıçta başarılı olamazsam hemen vazgeçerim.
13. ( ) Beklenmedik problemler ortaya çıktığında onlarla pek de iyi baş edemem.
14. ( ) Bana zor göründüklerinde yeni şeyler öğrenmekten kaçınırım.
15. ( ) Başarısızlık sadece benim daha fazla çabalamamı sağlar.
16. ( ) Sosyal toplantılarda kendimi pek de iyi idare edemem.
17. ( ) Arkadaşlarımı, arkadaş edinebilme yeteneğim sayesinde kazandım.
18. ( ) Kolay vazgeçerim.
19. ( ) Yaşantımda karşılaştığım sorunların çoğuyla baş edemiyor gibiyim.

DRINKING MOTIVES QUESTIONNAIRE

Aşağıda insanların alkollü içecekleri içmelerine neden olarak gösterdikleri bir liste bulunmaktadır. Lütfen her neden için,aşağıdaki cevap katagorilerini kullanarak ne sıklıkta içtiğinizi belirtin. Bu sorulara doğru ya da yanlış cevap yok. Biz sadece içtiğiniz zaman içmenize genellikle neden olan sebepler hakkında bilgi edinmek istiyoruz.

	Hiçbir zaman	**Neredeyse hiçbir zaman**	**Bazı zamanlar**	**Yaklaşık yarısında**	**Çoğu zaman**	**Neredeyse her zaman**
5. Eğlenceli olduğu için ne sıklıkta içersiniz?						
8. Keyfiniz kötü olduğunda neşelenmek için ne sıklıkta içersiniz?						
12. İçmiyorsunuz diye diğerleri sizle dalga geçmesin diye ne sıklıkta içersiniz?						
19. Partileri ve kutlamaları daha iyi hale getirdiği için ne sıklıkta içersiniz?						
2. Heyecan verici olduğu için ne sıklıkta içersiniz?						
11. Arkadaşınızın içmeniz için baskı yapması nedeniyle ne sıklıkta içersiniz?						
18. Sosyal toplantıları daha eğlenceli hale getirdiği için ne sıklıkta içersiniz?						
4. Hoş bir duygu verdiği için ne sıklıkta içersiniz?						
10. Sorunlarınızı unutmak için ne sıklıkta içersiniz?						
17. Sosyalleşebilmek için ne sıklıkta içersiniz?						
7. Mutsuz ya da gergin hissettiğinizde yardımcı olduğu için ne sıklıkta içersiniz?						
16. Partiden keyif almanıza yardımcı olduğu için ne sıklıkta içersiniz?						
9. Daha fazla kendine güvenli ya da kendinden emin hissettiğiniz için ne sıklıkta içersiniz?						
14. Hoşlanılmak için ne sıklıkta içersiniz?						
20. Arkadaşlarınızla özel durumları kutlamak için ne sıklıkta içersiniz?						
1. Verdiği duygu hoşunuza gittiği için ne sıklıkta içersiniz?						
6. Endişelerinizi unutmak için ne sıklıkta içersiniz?						

15. Dışlanılmış hissetmemek için ne sıklıkta içersiniz?						
3. Yüksek hissetmek için ne sıklıkta içersiniz?						
13. Hoşlandığınız bir gruba uyum göstermek için ne sıklıkta içersiniz?						

BECK DEPRESSION INVENTORY

1. (0) Üzgün ve sıkıntılı değilim.
(1) Kendimi üzüntülü ve sıkıntılı hissediyorum.
(2) Hep üzüntülü ve sıkıntılıyım. Bundan kurtulamıyorum.
(3) O kadar üzgün ve sıkıntılıyım ki, artık dayanamıyorum.

2. (0) Gelecek hakkında umutsuz ve karamsar değilim.
(1) Gelecek için karamsarım.
(2) Gelecekten beklediğim hiçbir şey yok.
(3) Gelecek hakkında umutsuzum ve sanki hiçbir şey düzelmeyecekmiş gibi geliyor.

3. (0) Kendimi başarısız biri olarak görmüyorum.
(1) Başkalarından daha başarısız olduğumu hissediyorum.
(2) Geçmişe baktığımda başarısızlıklarla dolu olduğunu görüyorum.
(3) Kendimi tümüyle başarısız bir insan olarak görüyorum.

4. (0) Her şeyden eskisi kadar zevk alıyorum.
(1) Birçok şeyden eskiden olduğu gibi zevk alamıyorum.
(2) Artık hiçbir şey bana tam anlamıyla zevk vermiyor.
(3) Her şeyden sıkılıyorum.

5. (0) Kendimi herhangi bir biçimde suçlu hissetmiyorum.
(1) Kendimi zaman zaman suçlu hissediyorum.
(2) Çoğu zaman kendimi suçlu hissediyorum.
(3) Kendimi her zaman suçlu hissediyorum.

6. (0) Kendimden memnunum.
(1) Kendimden pek memnun değilim.
(2) Kendime kızgınım.
(3) Kendimden nefrete ediyorum.

7. (0) Başkalarından daha kötü olduğumu sanmıyorum.
(1) Hatalarım ve zayıf taraflarım olduğunu düşünmüyorum.
(2) Hatalarımdan dolayı kendimden utanıyorum.
(3) Her şeyi yanlış yapıyormuşum gibi geliyor ve hep kendimde kabahat buluyorum.

8. (0) Kendimi öldürmek gibi düşüncülerim yok.
(1) Kimi zaman kendimi öldürmeyi düşündüğüm oluyor ama yapmıyorum.
(2) Kendimi öldürmek isterdim.
(3) Fırsatını bulsam kendimi öldürürüm.

9. (0) İçimden ağlamak geldiği pek olmuyor.
(1) Zaman zaman içimden ağlamak geliyor.
(2) Çoğu zaman ağlıyorum.
(3) Eskiden ağlayabilirdim ama şimdi istesem de ağlayamıyorum.

10. (0) Her zaman olduğumdan daha canı sıkkın ve sinirli değilim.
(1) Eskisine oranla daha kolay canım sıkılıyor ve kızıyorum.
(2) Her şey canımı sıkıyor ve kendimi hep sinirli hissediyorum.
(3) Canımı sıkan şeylere bile artık kızamıyorum.

11. (0) Başkalarıyla görüşme, konuşma isteğimi kaybetmedim.
(1) Eskisi kadar insanlarla birlikte olmak istemiyorum.
(2) Birileriyle görüşüp konuşmak hiç içimden gelmiyor.
(3) Artık çevremde hiç kimseyi istemiyorum.

12. (0) Karar verirken eskisinden fazla güçlük çekmiyorum.
(1) Eskiden olduğu kadar kolay karar veremiyorum.
(2) Eskiye kıyasla karar vermekte çok güçlük çekiyorum.
(3) Artık hiçbir konuda karar veremiyorum.

13. (0) Her zamankinden farklı göründüğümü sanmıyorum.
(1) Aynada kendime her zamankinden kötü görünüyorum.
(2) Aynaya baktığımda kendimi yaşlanmış ve çirkinleşmiş buluyorum.
(3) Kendimi çok çirkin buluyorum.

14. (0) Eskisi kadar iyi iş güç yapabiliyorum.
(1) Her zaman yaptığım işler şimdi gözümde büyüyor.
(2) Ufacık bir işi bile kendimi çok zorlayarak yapabiliyorum.
(3) Artık hiçbir iş yapamıyorum.

15. (0) Uykum her zamanki gibi.
(1) Eskisi gibi uyuyamıyorum.
(2) Her zamankinden 1-2 saat önce uyanıyorum ve kolay kolay tekrar uykuya dalamıyorum.
(3) Sabahları çok erken uyanıyorum ve bir daha uyuyamıyorum.

16. (0) Kendimi her zamankinden yorgun hissetmiyorum.
(1) Eskiye oranla daha çabuk yoruluyorum.
(2) Her şey beni yoruyor.
(3) Kendimi hiçbir şey yapamayacak kadar yorgun ve bitkin hissediyorum.

17. (0) İştahım her zamanki gibi.
(1) Eskisinden daha iştahsızım.
(2) İştahım çok azaldı.
(3) Hiçbir şey yiyemiyorum.

18. (0) Son zamanlarda zayıflamadım.
(1) Zayıflamaya çalışmadığım halde en az 2 Kg verdim.
(2) Zayıflamaya çalışmadığım halde en az 4 Kg verdim.
(3) Zayıflamaya çalışmadığım halde en az 6 Kg verdim.

19. (0) Sağlığımla ilgili kaygılarım yok.
(1) Ağrılar, mide sancıları, kabızlık gibi şikayetlerim oluyor ve bunlar beni tasalandırıyor.

(2) Sağlığımın bozulmasından çok kaygılanıyorum ve kafamı başka şeylere vermekte zorlanıyorum.
(3) Sağlık durumum kafama o kadar takılıyor ki, başka hiçbir şey düşünemiyorum.

20. (0) Sekse karşı ilgimde herhangi bir değişiklik yok.
(1) Eskisine oranla sekse ilgim az.
(2) Cinsel isteğim çok azaldı.
(3) Hiç cinsel istek duymuyorum.

21. (0) Cezalandırılması gereken şeyler yapığımı sanmıyorum.
(1) Yaptıklarımdan dolayı cezalandırılabileceğimi düşünüyorum.
(2) Cezamı çekmeyi bekliyorum.
(3) Sanki cezamı bulmuşum gibi geliyor.

BECK ANXIETY INVENTORY

Aşağıda insanların kaygılı ya da endişeli oldukları zamanlarda yaşadıkları bazı belirtiler verilmiştir. Lütfen her maddeyi dikkatle okuyunuz. Daha sonra, her maddedeki belirtinin BUGÜN DAHİL SON BİR (1) HAFTADIR sizi ne kadar rahatsız ettiğini yandakine uygun yere (x) işareti koyarak belirleyiniz.

	Hiç	**Hafif**	**Orta**	**Ciddi düzeyde**
1. Bedeninizin herhangi bir yerinde uyuşma veya karıncalanma				
2. Sıcak/ ateş basmaları				
3. Bacaklarda halsizlik, titreme				
4. Gevşeyememe				
5. Çok kötü şeyler olacak				
korkusu				
6. Baş dönmesi veya sersemlik				
7. Kalp çarpıntısı				
8. Dengeyi kaybetme duygusu				
9. Dehşete kapılma				
10. Sinirlilik				
11. Boğuluyormuş gibi olma				
duygusu				
12. Ellerde titreme				
13. Titreklik				
14. Kontrolü kaybetme korkusu				
15. Nefes almada güçlük				
16. Ölüm korkusu				
17. Korkuya kapılma				
18. Midede hazımsızlık ya da rahatsızlık hissi				
19. Baygınlık				
20. Yüzün kızarması				
21. Terleme (sıcaklığa bağlı olmayan)				

SELF-MUTILATION INDEX

Son 1 yıl içinde, intihar etme amacı taşımadan, KENDİNİZE ZARAR VERMEK AMACIYLA aşağıdaki davranışları yaptınız mı?

	Evet	Hayır	Evet ise kaç defa?
1. Kendini kesmek (kol, bilek vb.)			
2. Kendini yakmak (sigara, kibrit ya da sıcak başka bir obje ile)			
3. Deriye keskin bir obje (iğne, zımba, şiş vb.) batırmak			
4. Cilde resim, şekil ya da harfler çizmek			
5. Kendine bilerek vurmak			
6. Saç yolmak			
7. Bir yarayı yolmak (iyileşmesine izin vermeyecek kadar)			
8. Kendini bilerek ısırmak (dudak, dil vb.)			
9. Kafanızı bilerek bir yere vurmak (duvar, cam vb.)			
10. Kendini çimdiklemek (kan toplanacak kadar)			
11. Cildi kazımak			
12. Sürekli olarak aynı yeri kaşımak (kanatacak ya da yara izi bırakacak kadar)			
13. Cilde bilerek kimyasal bir madde dökmek (asit, çamaşır suyu vb.)			
14. Bilerek kemiğini kırmak			
15. Diğer _____ _____			

APPENDIX B

TEZ FOTOKOPİSİ İZİN FORMU

ENSTİTÜ

Fen Bilimleri Enstitüsü ☐

Sosyal Bilimler Enstitüsü ☐

Uygulamalı Matematik Enstitüsü ☐

Enformatik Enstitüsü ☐

Deniz Bilimleri Enstitüsü ☐

YAZARIN

Soyadı : TUNA

Adı : EZGİ

Bölümü : PSİKOLOJİ

TEZİN ADI (İngilizce) : RUMINATIVE PROCESSES AS A UNIFYINGFUNCTION OF DYSREGULATED BEHAVIORS: AN EXPLORATION OF THE EMOTIONAL CASCADES

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: