PREVALENCE RATES OF TRAUMATIC EVENTS, PROBABLE PTSD AND PREDICTORS OF POSTTRAUMATIC STRESS AND GROWTH IN A COMMUNITY SAMPLE FROM İZMİR

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Approval of the Graduate School of Social Sciences

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ABSTRACT

PREVALENCE RATES OF TRAUMATIC EVENTS, PROBABLE PTSD AND PREDICTORS OF POSTTRAUMATIC STRESS AND GROWTH IN A COMMUNITY SAMPLE FROM İZMİR

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Almost every individual in lifetime has the possibility of experiencing traumatic events which may highly impede coping mechanisms. Many studies indicated the prevalence of Post Traumatic Stress Disorder (PTSD) which is one of psychiatric consequences of traumatic events (TEs), as ranging from 1% to 9%. In recent years, attention to positive changes/transformations following TEs has gained interest. Post Traumatic Growth (PTG) is the concept that taps these transformations.

The aim of the present study, is to examine prevalence rates of TEs, probable PTSD in a community sample, and to analyze ways of coping, perceived social support, event-related rumination as possible predictors of posttraumatic stress (PTS) symptom severity and PTG. The role of personality and reported event-severity on two outcome variables i.e., symptom severity and PTG were also analyzed through structural equation modeling to test direct and indirect effects.

The sample consisted of 740 adults, 67.3% of them reported experiencing at least one TE, and prevalence of probable PTSD found as 10.8%. The main findings indicated that neuroticism, experiencing intentional/assaultive violence event-types, intrusive/deliberate rumination, fatalistic coping were associated with higher symptom severity, whereas conscientiousness, injury/shocking event-types, deliberate rumination, problem-solving coping, seeking-support coping, perceived

social support predicted higher PTG. The results of model-testing, indicated direct and indirect effects through personality to symptom severity and PTG, where the paths showed the mediator roles of rumination and coping. The results were discussed via theoretical models, and provided information that can aid in the delineation of risk-groups following TEs, and contributed to mental health services.

Key Words: posttraumatic stress, posttraumatic growth, ways of coping, event-related rumination, personality

ÖZ

TRAVMATİK OLAYLAR VE OLASI TRAVMA SONRASI STRES BOZUKLUĞU'NUN YAYGINLIK ORANLARI VE İZMİR'DEN TOPLUM ÖRNEKLEMİNDE TRAVMA SONRASI STRES VE GELİŞİM'İN YORDAYICILARI

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Her insanın yaşamı boyunca travmatik olaylarla karşılaşma olasılığı vardır. Bu olaylar bireyin baş etme becerilerini zorlayabilen yaşantılardır. Travmatik olaylar sonrası ortaya çıkabilen psikiyatrik rahatsızlıklardan biri olan travma sonrası stres bozukluğu'nun (TSSB) yaygınlığı, %1 ile %9 arasında değiştiği bulunmuştur. Son yıllarda, travmatik yaşantıların sadece olumsuz etkileri olmadığı, travmayla başa çıkmanın bireylerde olumlu değişimlere de yol açabileceği savunulmuştur. Bu kavram, travma sonrası gelişim (TSG) olarak adlandırılmıştır.

Bu çalışmanın amacı, toplum örnekleminde, yaşanılan travmatik olay türlerinin yaygınlığını, olası TSSB'yi, travma sonrası stres (TSS) belirti şiddetini, TSG'yi ve yordayıcılarını incelemektir. Bu amaçla, baş etme yolları, sosyal destek algısı, olaya-ilişkin ruminasyonun TSS belirti şiddeti ve TSG üzerindeki olası yordayıcı etkileri araştırılmıştır. Ayrıca, kişilik özellikleri ve rapor edilen olay şiddetinin, iki sonuç değişkeni (belirti şiddeti ve TSG) üzerindeki, doğrudan ve dolaylı etkileri yapısal eşitlik modelinde test edilmiştir.

Çalışma örneklemi, toplam 740 yetişkinden (%64.3 kadın, %35.7 erkek) oluşmaktadır. Bulgular, travmatik olay (TO) yaşayan katılımcıların oranının %67.3, olası TSSB yaygınlığının ise %10.8 olduğunu göstermiştir. Araştırma sonuçları, özellikle nevrotizmin, kasıt/saldırı içeren şiddet olay türlerinin, intrusif ve istemli

ruminasyonun, kaderci başa çıkma yolunun TSS belirti şiddetini yordarken, sorumluluk kişilik özelliğinin, yaralanma/sarsıcı olay türlerinin, istemli ruminasyon, problem çözme odaklı ve destek arayıcı başa çıkma yollarının, algılanan sosyal desteğin TSG'yi yordadığını göstermektedir. Model testi sonuçları değerlendirildiğinde ise kişilik özelliklerinden TSS belirti şiddeti ve TSG'ye kadar doğrudan ve dolaylı etkilerin olduğu gözlenmiş, özellikle başa çıkma ve olaya-ilişkin ruminasyonun aracı rolleri ortaya çıkmıştır. Çalışma bulguları travma literatürü çerçevesinde tartışılmış, travmatik yaşantılar sonrasında risk gruplarının özellikleri tanımlanmış ve ruh sağlığı hizmetlerinin planlaması ilgili öneriler sunulmuş.

Anahtar Kelimeler: travma sonrası stres, travma sonrası gelişim, başetme yolları, olaya-ilişkin ruminasyon, kişilik

To My Husband

&

Our Daughter ‘Shining Star’

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Throughout history my country has been exposed to various types of traumatic events. Therefore, finally I would like to wish ‘growth’ and peace for my beloved country.

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CHAPTER 1

INTRODUCTION

Adverse or stressful life events have been a part of daily modern living, thus these events and their consequences on individuals have been an important area of research. Moderate levels of stress may have some functional roles in making people move forward for their personal goals, whereas higher levels of stress may exceed the individual's capacity of coping abilities, influence every day functionality, thus may have detrimental effects on human health. The concept of trauma captures much attention because of its broader cover of extreme situations and its varied individual and community responses (Kirmayer, Lemelson, & Barad, 2007)

Traumatic events can be exemplified as natural disasters, accidents, life-threatening illnesses, torture, sexual violence, physical violence and the unexpected death of a loved one. Although a majority of people experience these events throughout their lives, not all people are effected in the same manner with these experiences. Some people may find traumatic events as challenging and handle the adversity effectively, find alternative solutions or ways of coping, moreover they reevaluate the situation to find out different meanings. By this way, the attributions about such events may be challenged, thus lead to reappraisals about the self, others, and world. These positive changes in the aftermath of trauma are conceptualized as Posttraumatic Growth (Tedeschi & Calhoun, 1996). Whereas some other people may experience difficulties in handling the situation, their perception and appraisal about the situations may impede their functioning, individuals may be depressed, become anxious or develop more severe psychological problems, one of which is called Posttraumatic Stress Disorder (PTSD) (APA, 2000). This diagnosis has an embedded definition of trauma, and 3 symptom categories; intrusive recollections as if reexperiencing the event, avoiding the event or event-related cues, and hyperarousal.

The individual's experience of trauma is shaped not only by intrapersonal and interpersonal elements, but also by societal factors. These additionally determine the reactions given to the event, and coping strategies (Drozdek & Wilson, 2007).

Since the processing of the traumatic event may show wide variations which may lead to varying consequences, these differing factors have been widely investigated by researchers.

From this standpoint, the present study aims both to examine the prevalence rates of traumatic events, and the factors (demographical variables, personality traits, coping strategies, event-related ruminations, social support) associated with the diverse outcomes (such as posttraumatic stress disorder, posttraumatic growth) of traumatic events.

In this thesis, the 'Introduction' chapter focuses on the relevant literature of trauma and traumatic life events, posttraumatic stress, posttraumatic growth, and their associates. This will be followed by the statement of the purpose of the study including a proposed model and the hypotheses. In the 'Method' chapter, the sample of the study is introduced and instruments utilized for the current study, procedure and the statistical analyses employed are presented. In the third chapter, the results of the statistical analyses conducted to test the hypotheses are presented. Finally, the fourth chapter is the discussion of the findings with respect to the relevant literature and theoretical framework, together with the presentation of their implications, limitations and directions for future research.

1.1 An Overview on Trauma

Trauma can be considered as a metaphor adopted and extended from the field of medicine to a broader scope of life experiences. 'Trauma' comes from the Greek word of wound, and since mid-1600s, it is used to refer to bodily wounds in medicine and surgery. Just like the body has physiological mechanisms to repair and heal the bodily damages, adaptive mechanisms are available to cope with the psychic wounds (the metaphor developed in late 1800s) which are a possible result of traumatic experiences. Sometimes the physical trauma exceeds the capacity of body to repair, and lasting damages or even death may occur. If the trauma is too severe for the body, then physical functioning may be lost. Likewise, a damage to one's nervous system may result in an impairment of behavioral, psychological or intellectual

functioning. Severe stressors cause a breakdown in the integrity of both the body and the mind (Kirmayer et al., 2007).

Psychological links of trauma have mostly started to capture attention as a result of wars (since World War I-II), in the efforts of providing services for the soldiers and civilians struggling with their injuries or losses. PTSD diagnosis was first introduced during the Vietnam War, however, in the Diagnostic Statistical Manual of Mental Disorders third version DSM-III (APA, 1980), PTSD symptoms were considered as acute and expected responses to extreme events. This view assumed that, either the event is abnormal or all reactions are commonly seen within the spectrum of normality (APA, 1980). This was criticized because of its over simplification of the complexity (Kirmayer et al., 2007). PTSD occurs following both ordinary and extraordinary events, during peacetime as well as war or disaster times (Breslau & Davis, 1992). Finally, through DSM-IV (APA, 1994) the distinction of Acute Stress Disorder and Posttraumatic Stress Disorder was presented; implying that the traumatic stress is not only limited to the acute responses but may lead to chronicity through pre-trauma and peri-trauma factors (Brett, 2007).

The initial studies conducted on traumatic stress seemed to have a tendency of focusing on the effects of one specific type of traumatic event causing specific syndromes such as 'concentration camp syndrome', 'rape trauma syndrome', 'battered wife syndrome'. This tradition continued with examining the reactions following a specific traumatic event such as an earthquake, cancer or torture (McFarlane & Girolamo, 2007). However, the cognitive, behavioral and emotional responses to traumatic events is presumed to have a common or similar patterns in the aftermath of overwhelming stress.

1.1.1 Definition of a Traumatic Event and Prevalence Rates

Although the prevalence rates and content of traumatic events are changeable, people continue to encounter (experience or witness) various negative events such as accidents in traffic or in workplaces, unexpected death of a loved one, chronic/ life-threatening illnesses, physical/ sexual abuse, violence, torture in lifetime. Life-threatening nature of traumatic events are distinguished from stressful events such as everyday hassles (e.g., being late to an appointment) or difficulties (e.g., struggle with unemployment, poverty).

In DSM-III, traumatic events were defined as being outside the range of usual human experience. Later, according to Criteria A in DSM-IV-TR (APA, 2000), an event is considered to be traumatic if the event involves both of these criteria: (1) experiencing or witnessing actual or threatened death or serious injury, or threat to physical integrity and (2) accompanying intense fear, helplessness or horror in response. Therefore, in addition to the actual event, the person must perceive or evaluate the event as severe and give emotionally intense response. In recently published DSM 5, criteria of qualifying a trauma has been modified by specifying actual/threatened death, serious injury and sexual violence. Further, the forms of exposure included specific conditions of witnessing, in addition to being victimization.

Many studies have been conducted throughout the world in order to determine the prevalence rates of experiencing at least one traumatic event in one's life time and found rates ranging from 55 to 90% (Boals, Riggs, & Kraha, 2013; Frans, Rimmö, Aberg, & Fredrikson, 2005; Breslau et al., 1998; Breslau, Peterson, Poisson, Schultz, & Lucia, 2004; Flett, Kazantzis, Long, MacDonald, & Millar, 2004; Norris et al., 2003; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995).

According to the meta-analytic findings, the most common traumatic events were serious illness (cancer), bereavement, terrorism, and natural disasters (Vishnevsky, Cann, Calhoun, Tedeschi, & Demakis, 2010). Another study from U.S. with 1000 adults (Norris, 1992) found 69% of experiencing a traumatic stressor in lifetime. The most common trauma was reported as tragic death, while accidents had the highest rating of frequency and impact.

Among a university students sample (N = 776) in North Texas, the most common traumatic events were reported as unexpected serious injury or death (15.46%) and serious accident (9.54%) (Boals et al., 2013). An epidemiological study among U.S. Population (Kessler et al., 1995), showed significant sex differences in terms of experienced event types. According to the results, men experienced more accidents (25%) than women (13.8%), whereas women experienced rape (9.2%) more than men (0.7%).

In Turkey, the prevalence rates of traumatic life events has been examined by Karanci and colleagues (2009) among a representative adult sample. In this study,

the life time prevalence rate of experiencing at least one traumatic event was found to be 84.2% in the 3 provinces (Ankara, Kocaeli, Erzincan) covered by the study.

Traumatic events are strong threats to individual's sense of safety and predictability, thus may provoke helplessness, hopelessness, and powerlessness. These events challenge people's capacity to adapt and survive. For example, human-made disasters such as rape, torture, assaults are thought to be more traumatic than natural disasters such as floods, hurricanes because of the greater sense of victimization. However, a meta-analysis (Rubonis & Bickman, 1991) showed that natural disasters result in higher rates of disorder. It is argued that although people have no capacity either to cause nor change the occurrence of such events (natural disasters), they have the capacity or potential to determine/choose the adaptive behaviors in the aftermath of such trauma (Gibbs, 1989; cited in van der Kolk et al., 2007).

There are studies in the literature where the nature of traumatic events are grouped in order to make comparisons between them. In the current study, Breslau and her colleagues (2004) categorized various types of events into four groups, as (1) assaultive violence, (2) other injury/shocking event experienced directly, (3) learning of trauma to another person, (4) a sudden unexpected death of a loved one. Since there is no item for identifying actual versus witnessed events in the research instrument utilised in the curent study, the categorization has been modified as (1) assaultive violence, (2) other injury/shocking event, (3) other-life transition events, (4) a sudden unexpected death of a loved one.

Traumatic events are characterized with intense sense of threat and intense fear, horror or helplessness response. If the traumatic experience exceeds the existing coping abilities, and disable the individual to get through, adapt or live in the present, then the individual's attention would be captured in the past either by the event itself or event-related cues. As a result, the individual has to do more than just adapting to the new situation, but rather has to restructure the mental processes and find meaning out of their experiences.

1.2 Posttraumatic Stress Disorder

The consequences of the traumatic events can vary considerably. For some people, a traumatic event may lead to severe psychological problems, one of which is

called Post Traumatic Stress Disorder (PTSD). The impacts of traumatic events were recognized over a hundred years, but labeled differently such as ‘compensation neurosis’, ‘nervous shock’, ‘hysteria’, ‘war neurosis’ (Yadin & Foa, 2007). However, since DSM-III (APA, 1980) and DSM-IV (APA, 1994), this mental health problem was labelled as PTSD and classified among anxiety disorders.

According to DSM-IV-TR (APA, 2000), PTSD diagnosis is met, after experiencing or witnessing a traumatic event as it is defined in the Manual. This psychopathology is characterized by three main symptoms; reexperiencing, avoidance and hyperarousal. A diagnosis of PTSD requires at least (1) one of five reexperiencing symptoms (Criteria B); such as intrusive memories, as if reliving the event via flashbacks, thoughts, images, recurrent dreams about the event, intense distress and physiological reactions (2) three of seven avoidance symptoms (Criteria C); such as avoiding trauma-related thoughts and feelings, activities or places, inability to remember an important part of the event, detachment from others, diminished range of affect, sense of foreshortened future (3) two of five arousal symptoms (Criteria D); sleep-related and concentration problems, feelings of irritability, anger, increased vigilance and startle response. If the duration of the disturbances (Criteria E) persists for more than one month, and the disturbance caused by the event leads to significant impairment (Criteria F) in at least two of social, occupational or other important areas of functioning, then the criteria (Criteria A to F) for diagnosing PTSD are met. These symptom clusters has been modified into four symptoms in DSM 5; as intrusion symptoms, avoidance symptoms, persistent negative alterations in cognitions and mood, and alterations in arousal and reactivity.

According to Young (1995) PTSD is different from other mental health disorders because of its association with attributional styles and memory mechanisms. The symptoms are attributed to a traumatic event which rely on memory. Since memory can be changeable, the traumatic experience may not be exactly copied and remembered in its full detail. It is claimed that reports of flashbacks may be beyond exact recall, but an interpretation or reconstruction (Laney & Loftus, 2005) that reflect imagination or worry (Lipinski & Pope, 1994) including ‘worst scenario’ ruminations (Merckelbach, Muris, Horselenberg, & Rassin, 1998).

However, Brewin (2005) claimed that memories about the event may reflect some of the experienced emotional arousal during the encoding and later retrieval stages.

Some literature claimed that intrusions are the fundamental symptoms of PTSD (Genest, Levine, Ramsden & Swason, 1990), where as the other symptoms are the derivatives of reexperiencing (Michael, Ehlers, Halligan, & Clark, 2005). Intrusion symptoms may allow to access to trauma without allowing to fully process the traumatic material, which in turn causes the symptoms to be maintained. Avoidance symptoms have a function of preventing the individual to remember and further activate the traumatic material and the belief or perception of failing to cope. It enables the individual to avoid the stimuli, unpleasant feelings and cognitions related to the event. However, this in turn causes the traumatic material to be left unprocessed. Both intrusions and avoidance symptoms lead to more arousal problems such as difficulty in concentration or being more aggressive (Price, 2007).

The individuals may also suffer from other psychiatric, marital, occupational, financial, and health problems after trauma. The overall quality of life and functioning may be impaired. Other psychiatric disorders, especially anxiety and affective disorders were found to be at increased risk for individuals after experiencing traumatic events. Moreover, previous studies indicated high rates of comorbidity of PTSD with alcohol/substance abuse, depression, dependence and suicide attempts (Kessler, 2000; Breslau, Davis, Andreski, & Peterson, 1991).

1.2.1 Prevalence Rates of Posttraumatic Stress Disorder

The studies carried out show that the prevalence rates change depending on the nature of the sample and type of traumatic event. Despite the high prevalence of exposure to traumatic stressors, PTSD rates range between 1–9.2% in community-based studies (Vasterling & Brewin, 2005).

The first epidemiological study of PTSD found a lifetime PTSD rate of 0.5% among men, 1.3% among women (Helzer, Robins, & MacEvoy, 1987). Another study at Duke University found 1.3% prevalence rate of lifetime PTSD and 0.4% at six months (Davidson, Hughes, Blazer, & George, 1991). In a random sample of young adults (21-30 years of age 39.1% were exposed to a traumatic event, and 23.6% had PTSD, and the overall lifetime prevalence rate of 9.2% was found (Breslau et al., 1991). A more recent study among a representative adult sample (18-

45 years of age) revealed that 89.2% of respondents reported at least one traumatic event, 9.2% had probable PTSD (Breslau et al., 2004). Kessler and colleagues (1995) found a lifetime prevalence of 7.8% in a nationally representative epidemiological study composed of 5,877 people. In some nations relatively low prevalence rates (e.g., in Iceland 0.6%) were found (Lindal & Stefansson, 1993). Among an adult sample in Mexico exposure to trauma was found to be 76%, and lifetime prevalence rate of PTSD as 11.2% (Norris et al., 2003). Parallel to these findings, probable PTSD rates as a consequence of experiencing a traumatic event in 3 provinces of Turkey was found to be 9.9% (Karancı et al., 2012).

However, relatively higher rates (16%) of PTSD were found among a representative sample of firefighters exposed to a natural disaster in Australia (McFarlane, 1988). Studies carried out among war veterans (DeGirolamo & McFarlane, 1996) showed that PTSD rates ranged between 2% to 70%, among which 15% was found to be actively involved in war. Among former prisoners of war and other types of prisonment including political reasons, studies (Van der Kolk, 2007) from different countries revealed PTSD rates as ranging from 50% to 70% or more. After terrorist attacks, the PTSD rates were reported as between 20% to 40%, among refugees more than 50%. The studies carried out among people exposed to various types of violence (De Girolamo & McFarlane, 1996) showed 25% of PTSD prevalence. Other studies in samples at-risk (accidents, hospitalized patients) demonstrated that PTSD rates vary depending on the type, severity, length and consequences of stressor, and prior mental health status. So, research on the rates of PTSD seems to show that the rates differ according to the type of traumatic event. The next section will present models for PTSD, where the concept and related issues are covered more comprehensively.

1.2.2 Models of PTSD

In the literature, there are several approaches defining stress and the nature of stressors. One of which is suggested by Foa & Kozak (1986) as Emotional Processing Theory, originally associated with exposure therapy for anxiety disorders, has been used in the efforts to undertand underlying factors leading to PTSD or recovery. The theory emphasized the presence of ‘fear structures’ in which fear stimuli is processed. When the individual feels him/herself in danger, or perceive

threat, a fear structure should activate adaptive behavior. It is proposed that PTSD includes a fear structure in which harmless stimuli are related with meaning of danger, and exaggerated interpretation of self-incompetence (Foa & Riggs, 1993; Foa, Steketee, & Rothbaum, 1989).

Foa and Rothbaum (1998) in their integrated model proposed 3 components effecting the development of PTSD; pre-trauma factors (such as personality), factors related to memory records about the event, and post-trauma factors. A perception of an inability to cope with any trauma-related material leads individuals to avoid. When trauma challenges preexisting schemas such as self-competency and safe-world, or when it reinforces schemas such as self incompetency and dangerous-world, then emotional processing is blocked. According to the model, factors that inhibit recovery are divided into two as trauma related and posttrauma factors. The trauma related factors are disconnected memories of traumatic event, each including intense emotions such as fear, confused thoughts, detailed images of specific scenes, and bodily reactions such as physical pain (Foa & Riggs, 1993). Disturbances such as nightmares, sleeping and concentration difficulties, impairment in daily life functioning and attitudes of others are among posttrauma factors that inhibit recovery.

According to McFarlane and Yehuda (1996; cited in van der Kolk et al., 2007), PTSD is a process composed of 3 stages: (1) acute stress response, (2) chronic response to trauma, (3) long-term adaptation to having PTSD symptoms. The responses of the individual are influenced by biological, social, temperamental, and experiential factors. Acute stress responses involve the threat perception at the time of event and distress levels that effect the individual's functioning. At the second stage, the individual may become disabled, and disturbed by the symptoms. Finally, the individual becomes more tolerable to the symptoms and to suffering which determines the long-term adaptation. The initial days following trauma that involve distressing and intrusive recollections of the traumatic experience are considered to be universal indicating a normal processing of reappraisal. The meaning making process would be a result of the trauma's impact on different domains (Freddy, Resnick, & Kilpatrick, 1992). Another critical issue for adaptation is the availability of support and/or perceived support. Finally, coping capacity of the individual with

the distress and symptoms become important. At this stage, the individual has to cope with the constant and intrusive memory of trauma instead of the trauma itself. Although the danger is no longer there, the feelings of threat or fear continue to overwhelm the individual. These repeated memories and intrusions lead to retraumatization and suffering from PTSD. Thus, the attributions and appraisals become essential in determining the long-term outcome.

According to the cognitive model of PTSD, pre-trauma experience, trauma severity, and the threat perception are important in the development or maintenance of PTSD (Horowitz, 1986; Foa et al., 1989; Ehlers & Clark, 2000). The appraisal of threat severity has been proposed to have an indirect effect on PTSD by using cognitive and behavioral coping strategies such as cognitive avoidance and thought suppression which prevent recovery (Olff, Langeland, Berthold, 2005). The negative beliefs and appraisals of ongoing threat, effects the responses given to trauma, in turn PTSD (Foa et al., 1989; Ehlers & Steil, 1995). During the event, if the individual's reactions to the traumatic event involves negative appraisals such as the world is dangerous, self is incompetent, then this may increase the threat perception and severity of the symptoms of PTSD (Ehlers, & Clark, 2000). A common mechanism claimed that when people have negative interpretations of intrusions, threat perception is directly maintained (Ehlers & Clark, 2000). This threat perception is accompanied by negative emotions and re-experiencing symptoms. These are more likely to motivate the patient to engage in dysfunctional behaviors such as avoidance, or dysfunctional cognitive strategies such as suppression of intrusive memories, that maintain the disorder.

As can be inferred from the theoretical frameworks, among many factors the acute/ immediate psychological reaction following the traumatic event is one of the critical periods which determines the outcome. There is a problem in operational conceptualization of intensity or nature of the stressor (Amir, Kaplan, & Kotler, 1996). Trauma severity, in general, has been evaluated with symptom severity (Helzer et al., 1987). The features of the stressor such as the length, duration and intensity of exposure were predictors of individuals' responses to stress and PTSD symptom severity. Other viewpoints claimed that rather than the intensity of stressor (Breslau et al., 1991), degree and the nature of stressor best predicts PTSD, where

type of stressor is not equal to the severity of stressor. As McNally (2003) stated it is not just the type of event, but rather the subjective appraisal of the event in terms of perception of loss, harm, and controllability that has particular effects on PTSD (Ozer, Best, Lipsey, & Weiss, 2003; Norris, Friedman, & Watson, 2002). For example, some individuals are effected by events such as divorce, economic crisis and develop PTSD whereas others never develop PTSD following events such as torture. Therefore, every individual may perceive, appraise and respond to the same traumatic events differently. Both the concrete or perceived reality of the event and the reaction given are presumed to determine the level of perceived severity of the traumatic event. In the aftermath of a traumatic event, being distressed can be considered as a normal reaction given to feelings of horror, helplessness, or fear. This acute distress reaction and related symptoms are expected to be resolved so that PTSD is not developed. Therefore, initial emotional reaction influences the capacity of the individual to respond to threat in an adaptive way (Perry, Difede, Mushgi, Frances, & Jacobsberg, 1992). Individual's immediate or short-term responses (during the 'impact phase' of a stressor) which is labelled as 'peritraumatic' responses (Marmar et al., 1994), or 'acute catastrophic stress reactions' (Horowitz, 1986) include behaviors, emotional or cognitive experiences and mental processes with defenses. Intensity of perceived threat influences the stress response in the aftermath of trauma (McNaughton & Corr, 2004). The 'peritrauma' reactions such as dissociation, freezing/surrender, disorganization, and perceiving events as uncontrollable and unpredictable were found to be indicators of prolonged distress (Foa & Rothbaum, 1989). Some people's appraisal of the stressor may be threatening (damage/harm possibility), whereas for others challenging (opportunity for gain) (Olff et al., 2005). Following the period of impact phase, the subjective distress level predicts the later development of PTSD (Perry et al., 1992).

In addition to emotional distress or perceived severity of threat, another subjective variable which was found to predict PTSD is perceived social support (Perry et al., 1992). Social support has been evaluated as another essential factor significantly effecting the outcomes in the aftermath of stressful life events. Especially in a collectivist culture, trauma survivor has a potential environment (extended family members, friends, neighbours) where the experiences can be shared

and processed. Moreover, in the aftermath of traumatic events, individuals needs for safety, stability, security, empathy and respect has to be satisfied/met (Price, 2007). Therefore, they may look for such support to get the unmet or disrupted needs following trauma. One important point is that, individuals exposed to a traumatic event, may start to perceive their relationships as less supportive (Stroud, 1999). The changes in stress level and social support effect each other, especially when poor coping mechanisms are utilized (Hobfoll, 1989). The perception of stress and resources can be influenced by social support, while stress and loss of resources may worsen social support (Vranceanu, Hobfoll, & Johnson, 2007).

There is an increasing number of studies inquiring the mechanisms underlying possible outcomes of experiencing traumatic life events. The pathways that lead to PTSD and/or PTG are still not clear. It has been agreed that it is not so much the event but how people process the event and cope with it that determines the positive versus negative outcomes (Aldwin & Levenson, 2004). Lazarus and Folkman (1984) suggested that individual's capacity of processing the event, such as meaning making is an important factor related to the ability to cope. Tedeschi and Calhoun (2004) claimed that rumination is the key variable in their model that includes personality, coping, self-disclosure, and social support. In light of these views, event-related rumination is investigated in this study as one of the posttrauma factors leading to negative or positive outcomes.

Rumination is referred to as a cognitive process where the individual thinks repetitively about the root causes and consequences of an event, situation or information. Researchers conceptualized the term in different forms, mostly focusing on the negative content. In a more recent approach to rumination, Cann et al., (2011) distinguished two types of rumination, intrusive and deliberate, which can be assessed through an inventory. *Intrusive rumination* involves involuntary, repetitive thoughts about the traumatic event. This type of rumination is considered as more related with intrusive thoughts that are part of reexperiencing symptoms of PTSD (Cann et al., 2011; Tedeschi & Calhoun, 2004). Intrusive thoughts following a significant negative life event, are evaluated as expected part of a series of responses. However, some researchers distinguished reexperiencing as remembering the traumatic event, from rumination as thinking about the event repetitively (Ehlers &

Clark, 2000). Rumination is also different from intrusive thinking in that it involves a choice of engaging in this kind of thinking, in order to gain an understanding about the emotions and problems (Lyubomirsky & Nolen-Hoeksema, 1993). While rumination was reported equally following both negative and positive events, intrusive thinking was found to be reported only after negative life events (Luminet, Zech, Rime, & Wagner, 2000). During intrusive rumination, the individual keeps thinking about issues such as ‘‘I found myself automatically thinking about what had happened’’, ‘‘Thoughts about the event caused me to relive my experience’’, ‘‘Other things kept leading me to think about my experience’’.

Rumination about the traumatic event have been suggested as an important factor in the development and maintenance of post-traumatic stress symptoms (Ehlers & Clark, 2000; Bennett & Wells, 2010; Affleck & Tennen, 1996; Calhoun, Cann, Tedeschi, & McMillan, 2000; Taku, Cann, Calhoun, & Tedeschi, 2008). Michael, Halligan, Clark, & Ehlers, (2007), reported rumination as a predictor and maintenance factor for chronic PTSD (Foa, Zinbarg, & Rothbaum, 1992), in which ‘why?’, ‘why me?’, ‘what if?’ questions are asked in a compulsion-like manner, repetitively. Since these questions involve unproductive abstract thinking, and attention is focused on the negative causes of the adverse event, this type of rumination can be characterized as maladaptive, in which problem-solving processes are impeded (Watkins, 2008). Rumination in response to intrusions may impede the process of cognitive adaptive reappraisal of trauma and possibility of changing related trauma memory (Ehlers & Clark, 2000). If the focus of attention becomes stuck in the past, and the individual keeps on ruminating about the event, then the individual will be overwhelmed with the negative emotions associated with the traumatic event, which results in decreased abilities of dealing with the daily life problems, and leads to further distress (Nolen-Hoeksema & Morrow, 1991). Some people actively avoid thinking about the event, believing that this would preclude understanding oneself. However, if the individual avoids, suppresses, or tries not to think or not to ruminate about the traumatic event, then the individual becomes more involved with the cognitive process of thinking more about it (Gold & Wegner, 1995). Ehlers & Steil (1995) considered this process as a form of a cognitive

avoidance, helping the individual to divert from the distressing cognitions or images of the traumatic events..

Ehlers & Clark (2000) claimed that rumination has an impact on PTSD symptoms in three ways: (1) rumination prevents the processing of traumatic material, (2) rumination heightens negative appraisals of trauma and its consequences, (3) rumination may activate symptoms (tension, dysphoria, hopelessness) and trigger intrusive memories. Other studies resulted in explaining rumination as impeding successful problem solving (Nolen-Hoeksema & Morrow, 1993). Therefore, there should be some other way of dealing with the trauma besides intrusive rumination. It is claimed that while intrusive thinking helps individual to search and find an understanding about the event, this kind of rumination predicts *deliberate rumination* as well (Tedeschi & Calhoun, 2004; Calhoun et al., 2010; Cann et al., 2011). In other words, although this recurrent thinking involves intrusive undesired thoughts, symptoms of distress, or controlled thinking, this may maintain individuals' efforts in trying to make meaning out of the experience and solve the problem (Watkins, 2008). Previous research claimed that traumatic events challenge the individuals' existing schemas and assumptions about the self, others, and the world (Janoff-Bulman, 1992). According to Tedeschi and Calhoun (1995; 2004), trauma may cause individuals to process the event over and over again, in order to deal with the mismatch between the individual's preexisting schemas and the current life crisis. This in turn, may lead individuals to challenge and restructure their cognitions and facilitate growth. Therefore, rumination may facilitate coping if it helps the individual to integrate the experience with preexisting beliefs (Horowitz, 1986). Tedeschi & Calhoun (2004), claimed that in order for cognitive processing to promote growth, effort and time is needed. This effortful and intentional cognitive processing about the traumatic event, which also reflects problem-solving and meaning-seeking is called deliberate rumination. Deliberate rumination helps the individual deal with the traumatic event and manage the cognitive processing by voluntarily asking questions and thinking about issues such as ''Could I make meaning from my experience?'', ''What does this mean for my future?'' and ''How does this effect my view of the world?''.

While some theorists questioned the concept of rumination as a type of emotion-focused coping (Matthews & Wells, 2004), others claimed that rumination is a different concept in that rumination is associated only with cognitive responses to negative events whereas emotion-focused coping involves various types of behavioral responses to a variety of event types. Moreover, the meta-cognitive model of PTSD (Wells, 2000) regarded rumination and worry as dysfunctional coping strategies, that inhibit emotional processing of the traumatic event and thus maintain PTSD symptoms.(Bennett & Wells, 2010)

Parkinson (2000) proposed a conceptual model summarizing the factors related with traumatic events which have impact on the chronicity of outcomes. The model examines the indicators under three group of factors: (1) Pretrauma factors, (2) Traumatic event-related factors and factors during the event, (3) Posttrauma factors. This model is illustrated in Figure 1. According to this model, social support influences both the event-related factors and post-event factors. The available social networks have an effect not only on reactions and appraisals at the time of the event or immediately after the event, but also post-event evaluations and coping capacities.

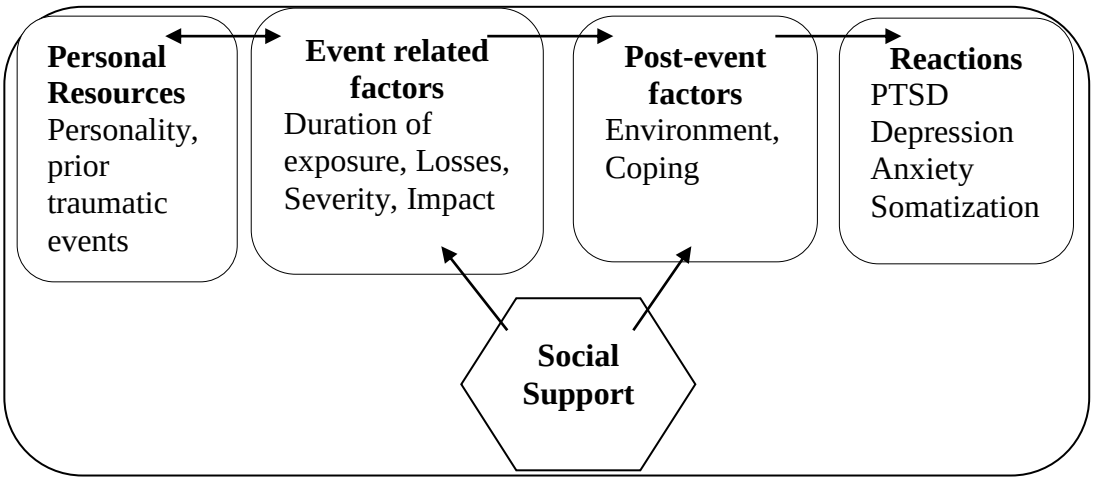

Figure 1 Factors effecting the adjustment to Traumatic Events (Parkinson, 2000)

The stressful and distressing events may be perceived as traumatic for some individuals and not for others. The various ways of individuals' interpreting and experiencing the events may depend on different factors (personality, coping etc.). The trauma itself may block the basic skills of individuals. The distressing side may cause the individual to feel overwhelmed by the trauma and impair coping abilities. Some people may have sufficient resources and adapt, while others may utilize immature, maladaptive ways to cope with the stress, and may need more adaptive ways and resources to work through the traumatic material.

Coping is defined as 'cognitive and behavioral efforts made to master, tolerate, or reduce external and internal demands and conflicts' (Folkman & Lazarus, 1980, p.223). According to Lazarus & Folkman's (1984) approach referred to as cognitive appraisal theory, there are two stages of responding to stressful life events, namely the 'primary appraisal' and the 'secondary appraisal'. At the primary appraisal stage, the individual first makes a judgement about the situation whether the experience has harmed, threatened or challenged them, This evaluation is influenced by situational features such as the nature of stressor, degree of familiarity, timing, context, and thoughts about possible impacts. Additionally, the evaluation is also influenced by psychosocial features of the individual such as values, motivations, roles, personality traits, religious beliefs. The secondary appraisals depend on the evaluations of one's available resources to cope. This covers individuals' engagement in cognitive processing (i.e., attribution of responsibility and controllability), in which these evaluations lead individuals to determine the ways of coping with the stressor (Lazarus & Folkman, 1984). In deciding to cope with the stressor, the individual uses both psychological (problem solving skills) and social resources (social support) and assess whether these perceived individual resources are sufficient to mitigate the effects of the event. According to Lazarus & Folkman (1984), an essential determinant of coping ability is the individual's meaning making capacity out of their experiences. Both the responses to the traumatic event and the individual's capacity to cope with their reactions are important. Finally, the person gives meaning out of these evaluations and try to cope with the adversities of the trauma.

Janoff-Bulman (2004) claimed that the essential factor after the highly distressing traumatic events is the ability to cope effectively. These strategies have been classified and conceptualized by researchers with slight differences. In a broad classification, coping may be either problem-focused (task-focused, active coping, positive coping, direct coping, approach coping) which includes purposeful efforts to actively solve the problem, attempting to alter a situation, or may be emotion-focused (suppression, avoidance, passive coping, negative coping, maladaptive coping) where the person uses self-oriented emotional reactions to reduce stress, if there is no change according to the way they appraise or interpret the threat (Billings & Moos, 1981; Folkman & Lazarus, 1985; Moos & Schaefer, 1993). The findings clearly show that emotional coping leads to poorer outcomes (Brantley, O'Hea, Jones, & Mehan, 2002). Some researchers added avoidant coping strategy in which the person is avoiding the stressful situation, trying to minimize the problem, withdrawing from the problem, or venting their emotions (Moos & Schaefer, 1993), and social support seeking coping where the individual is obtaining advice, seek accompany or express emotions (Carver, Scheier, & Weintraub, 1989; Litman, 2006). Although pathways were not clear (Huijts, Kleijn, van Emmerik, Noordhof, & Smith, 2012), previous findings indicated that traumatic events may decrease individual's ability to cope with the stressors, and lead to an increase in using maladaptive coping strategies (Emmelkamp, Komproe, Van Ommeren, & Schagen, 2002). The traumatized individuals may continuously engage in search for a meaning to make sense of the past, handle the present time and alter future. In trying to accomplish that, either religion or spiritual life accompanies some of the individuals in the meaning-making process. Therefore, religious coping is regarded as another coping strategy used in order to cope with the stressful life events (Pargament, 1997). This coping style involves praying, seeking God's guidance, or seeking support from God. Religious coping can be considered as involving two patterns; positive or negative (Pargament, Smith, Koenig, & Perez, 1998). Positive religious coping, entails a trusty and secure relationship with God, where the problem or the stressful life event can be handled with the help of God. This pattern of coping is believed to be powerful in dealing with the losses in the way that helps forgiving and letting go, and searching for meaning and some benefits of the traumatic experiences. However,

negative religious coping involves insecure, untrusty relationship with God. The adverse events are interpreted as a punishment from God or as a result of a devil's action. The individuals may feel confused about justice issues, may not be satisfied with God and may have difficulties in interpreting the meaning of the traumatic events (Pargament et al., 1998).

According to other coping models, primary coping strategies people use in the aftermath of stressful life events are defined with similar labels; for example, approach coping and avoidance coping, or active versus passive/avoidant coping (Snyder & Pulver, 2001). The common distinction is that while one coping strategy (approach, active) involves dealing the problem directly and work for a solution to reduce the effects of the adverse event, the other coping strategy (passive, avoidance) tries to escape from the distress/negative emotion created by the event without getting involved in the stressor (Lazarus & Folkman, 1984).

Some studies examined the types of coping styles as mediators for different outcomes (Bal, vanOost, De Bourdeaudhuij, & Crombez, 2003). Coping should be viewed as a process, where it may change according to the type of the event, the changes in stressor over time, and the individual differences (Horowitz, 1986). Coping style based on individual differences may result with ranging outcomes of stress reaction from distress to disorder (Brewin, Dalgleish, & Joseph, 1996).

A conflicting finding has demonstrated that PTSD was equally associated with all coping strategies (Spurrell & McFarlane, 1993). It is claimed that rather than the coping strategy, the essential fact is the ability to cope successfully. When the individual copes effectively, distress is relieved, social life and sense of self-worth is preserved, negative effects on functionality is managed (Pearlin & Schooler, 1978). In order to cope successfully however, coping strategy must correspond both with the available individual resources and the circumstances of the event. When the individual has no control over the situation, then acceptance, passive surrender, cognitive restructuring may be appropriate. In other conditions, the individual must directly take action to change the stressor or relation with the stressor, and actively seek help. Social support can be regarded as a factor helping to recover from trauma by influencing the type of coping style utilized (O'Brien & DeLongis, 1997) in that active support may influence efforts to manage the situation more easily. This may

also improve controllability perception over the situation and self-confidence, which in turn increases the selection of active coping strategies. Social support networks may provide the opportunity to express emotions, discuss concerns, challenge negative beliefs and thus reduce the rates of engaging in avoidance coping strategies (Flannery, 1990; Folkman & Lazarus, 1990), and increase engagement in approach coping.

1.2.3 Literature Findings Related to Factors Associated with Posttraumatic Stress Disorder

1.2.3.1 Pretrauma factors; socio-demographic variables, personality factors

Genetic and biological risk factors, as well as socio-demographic factors (e.g., age, education, income, employment, marital status), mental health status, the environment and the personality traits can be evaluated among the pretrauma factors.

With respect to gender, a large-scale study among a representative sample of women in U.S. found 70% of people experiencing at least one traumatic event involving sexual or physical assault, natural disaster, accident, homicide of a family member (Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993). In this study women reported lifetime PTSD was 17.9%, and current PTSD was 6.7%. Epidemiological studies reported a lifetime prevalence of exposure to a trauma as 60.7% in men, 51.2% in women, PTSD 8.1% in men and 20.4% in women (Kessler, 2000; Kessler et al., 1995). In Taiwan, after the major earthquake the PTSD rate was found to be 10.3% (Lai, Chang, Connor, Lee, & Davidson, 2004); two times more prevalent in women (18%) than in men (7.7%). Five percent to eight percent of men and ten percent to twenty five percent of women were found to suffer from PTSD in their lifetimes (Breslau et al., 1991; Kimerling, Ouimette, and Wolfe, 2002). Several studies (Norris, 1992) emphasized the effects of age and sex as factors effecting the exposure to trauma; younger people having higher rates of PTSD, and women developing PTSD twice more than men in the aftermath of trauma. A study (Hapke, Schumann, Rumpf, John, & Meyer, 2006) in a representative sample of 4075 adults, revealed that although exposure to any trauma in the lifetime did not vary by gender, the probable PTSD diagnosis was found to be higher in women (11.1%) than men (2.9%). Results of an epidemiological study conducted in Europe, showed that women experienced less potentially traumatic events than men, however PTSD

occurred significantly more in women than men in France and in Netherlands (Darves-Bornoz et al., 2008). This gender differences has been also found in Sweden (Frans et al., 2005) and in American studies (Breslau, 2002). Epidemiological research reported the cause of traumatization for men was more frequently related to accidents, war, assaults, natural disasters and for women childhood abuse (Kessler et al., 1995). In the general population, between 17% to 33% women reported sexual or physical abuse (Finkelhor, Hotaling, Lewis, & Smith, 1990), whereas in mental health settings this rate increased to 35% - 50% (Cloitre, Cohen, Han, & Edelman, 2001). Previous researchers discussed this issue as women being at a greater risk of experiencing the specific potentially traumatic events (PTE) that lead to more PTSD. 63.6% reported a lifetime experience of at least one PTE, and the mean number of PTE was 1.5. Six events that were found to be most significantly associated with PTSD were being raped, being beaten up by spouse or romantic partner, an undisclosed private event, serious illness, being beaten up by caregiver, being stalked. Additionally, it is suggested that men may not express their distress emotionally but rather behaviorally (Darves-Bornoz et al., 1998).

With respect to employment, a previous study indicated that PTSD group had a lower rate of employment compared to a non-PTSD group (Alonso et al., 2004). However, this was proposed to be a condition occurring as a post-event impact in which the event influenced the individual's daily life functioning, thus employment status. The results of another research study (Amir et al., 1996) with 66 PTSD diagnosed individuals who were exposed to terrorism, battlefield experience, work and traffic accidents, showed that education and work status were the significant protecting variables.

The previous research results stated that being male, young age, low income level, low education level were risk factors for encountering more traumatic experiences (Frans et al., 2005; Breslau et al., 1991), while being women, old age, low education and income levels (Davidson et al., 1991), preexisting psychiatric disorder history were found to be related to PTSD (Norris et al., 2003; Sümer, Karanci, Berument, & Gunes, 2005; Perkonigg et al., 2000; Breslau et al., 1991).

In a study with a Turkish adult community sample being female, low level of education and income, being middle aged seemed to be risk factors for being

exposed to traumatic events and developing PTSD. In considering the types of life crises accidents, natural disasters and unexpected death of loved ones were the most frequent events reported whereas experiencing death or chronic illness seemed to be a higher risk factor for developing PTSD. The results also revealed that although there were no significant gender differences in exposure to traumatic events, women had more PTSD diagnosis. This was assumed to be associated with differences in the types of events experienced, social/work lives and cognitive processing of women (Karanci et al., 2009).

Since not everyone exposed to a traumatic event develops a pathology or PTSD, other risk factors must play a role in the development of the disorder. Therefore, there has been research on the possible predisposing variables effecting the development of PTSD. One factor that has repeatedly been associated with PTSD symptoms and negative changes is the personality trait of neuroticism (Evers et al., 2001; Tedeschi & Calhoun, 1996, Val & Linley, 2006). Neuroticism on its own or in combination with introversion have been found to be associated with the severity of posttraumatic stress (Ai et al., 2005; Evers et al., 2001; Val & Linley, 2006; Emmelkamp, 2006).

Chilhood traumatic experiences and neuroticism's role (Brewin, Andrews, & Valentine, 2000) were often examined in developing PTSD, while positive traits such as creativity, flexibility, open-mindedness, were regarded as protective factors. Therefore, internal resources seem to be important for either functioning as a protective or a risk factor in struggling with the traumatic stress. Emmelkamp (2006) from a different view claimed that since most studies are retrospective, personality assessment after trauma may be less reliable and may be affected by the traumatic experience itself. Another view claimed that personality factors may effect the individual's perception of the event as traumatic or not (Price, 2007). In another study, results indicated that two personality factors i.e., extraversion and conscientiousness, were not effected by the reported stressful events, whereas those with neuroticism influenced more by the event (Löckenhoff, Terracciano, Patriciu, Eaton, Costa, 2009). In a study with survivors of maltreatment it was suggested that the predispositional factor of helplessness (Seligman, 1975) and diminished coping resources may effect the perception of life events as more stressful. The literature

also indicated that helplessness is related to more neuroticism, less optimism, less extraversion, to more passive coping and less social support (Evers et al., 2001).

1.2.3.2 Trauma-related factors: type of the event, perceived severity of the event (peritrauma severity), time elapsed since the event, number of prior events

Sexual assault, rape as opposed to other types of traumatic event, number of other recent traumatic life events, and reactions given during the event were found to be related to PTSD and higher levels of PTS symptoms severity (Amir & Sol, 1999; Frans et al., 2005).

Previous findings indicated that the consequences of experiencing a traumatic event differ according to the type of the event (Breslau, 1998). The events involving human-made/intentionally caused actions such as torture, abuse, violence were found to be related more to PTSD. The incidence rates of PTSD has been found to be 55% after rape, 35% after childhood abuse, 17% after assaults and 7% after severe accidents (Kessler et al., 1995). Health-related chronic or life-threatening events (myocardium heart attack, HIV/AIDS, cancer) are also considered as traumatic events. In studies among cancer survivors, PTSD and symptoms were reported as up to 19% (Mehnert & Koch, 2007). Norris (1992) claimed that brief and specific events experienced at one time such as accidents may have enduring effects as compared to combat experience. In another study (Amir et al., 1996), type of the events which were grouped into four as war, terrorism, work accidents and traffic accidents were not significantly different in terms of demographic variables and symptom severity. However, war veterans were found to be more severely effected by PTSD. A study (Hapke et al., 2006) in a representative sample of 4075 adults, found specific types of trauma (especially rape and sexual abuse) and preexisting anxiety disorder as the predictors of PTSD.

Meta-analysis of epidemiological studies indicated on the average 20% of people experiencing traumatic events developed posttraumatic stress disorder (Yehuda & McFarlane, 1995). Compared to other types of events, war and sexual assault experiences (Norris, 1992) were more likely to lead to PTSD (Foa et al., 2000). The nature of man-made traumas which are violent and upredictable, may be the reason for this link.

The most commonly experienced traumatic event types leading to PTSD were combat and witnessing death or severe injury for men, whereas rape and sexual assault were the events for women. According to the results of an epidemiological study of US population, 48.4% of women who experienced rape, and 10.7% of men who witnessed death or serious injury, developed PTSD (Kessler et al, 1995).

Another meta-analysis (Tolin & Foa, 2006) found that although a potentially traumatic event is more likely to be experienced by men, women are more likely to meet the criteria for PTSD. Depending on the type of the event, for example for nonsexual assault, PTSD was more reported in women than men, meanwhile for sexual assault or child sexual abuse there were no significant gender differences in PTSD. Since the same type of potentially traumatic event (PTE) elicits more severe symptoms in women than men, there might be differences in processing the event or the coping strategies employed.

The results of a recent study (Mulder, Fergusson, & Horwood, 2013) revealed that non-traumatic life events (i.e., Criteria A of PTSD not met) were also associated with PTSD symptoms. Previous studies also demonstrated this link between PTSD symptoms and a wide range of non-traumatic events such as marital problems (Dattilio, 2004), employment related stressors, and bereavement (Zisook, Chentsova-Dutton, & Shuchter, 1998). According to these results a traumatic event is a necessity for PTSD to occur, but it is not sufficient (Shalev, 2007). Although these events are prevalent, and likely to cause distress, however, only a minority of individuals develop PTSD.

Goldberg, True, Eisen, & Henderson (1990) argued that genetic predisposition have an impact on increasing both the possibility of being exposed to a traumatic event and the intensity of PTSD symptoms. Rather than studying only the traumatic event and vulnerability as causal factors for PTSD, the severity, the intensity, the duration of early symptoms and more underlying factors fostered the necessity to examine causal relationships in more comprehensive models.

Individual's response during the trauma was another factor that found to be related to PTSD (Norris et al., 2003; Sümer et al., 2005; Perkonigg et al., 2000; Breslau et al., 1991). In their research among crime victims, Kilpatrick et al. (1989) demonstrated that life threat during crime and physical injury predicted PTSD. This

initial/ acute reaction given to a potentially traumatic event, such as helplessness, horror, intense fear, were presumed more likely to be experienced in women (Olff, Langeland, Draijer, & Gersons, 2007). These gender differences in acute reactions to trauma may have led to more PTSD in women (Tolin & Foa, 2006). This difference is suggested to occur because of cognitive or emotional processing differences among men and women. Women are proposed to perceive the situations as more threatening, and feel more loss of personal control. The maladaptive peritraumatic processing during the trauma was suggested to increase the intrusion symptoms in PTSD (Ehlers & Clark, 2000; Brewin et al., 1996). The research findings also indicated a positive relationship between peritraumatic dissociation and reexperiencing symptoms (Laposa & Rector, 2012), flashbacks (Bremner & Brett, 1997) and PTSD.

Passage of time since the traumatic event is another factor determining the differential consequences. In a study, Mayou, Ehlers, & Bryant (2002) found that three years after a motor vehicle accident, 11% of the participants still suffered from PTSD. Participants who interpreted their intrusive memories of the accident in a negative way by either ruminating or trying to suppress were more likely to suffer from PTSD symptoms at 3 years. About half of the patients who met the diagnostic criteria at 1 year had recovered by 3 years. Foa and Rothbaum (1989) demonstrated a decline in PTSD symptoms following rape, such as 94% at first week after the trauma, 52.4% at two months post trauma and 47.1% at nine months. Similarly, PTSD symptoms following violent crime accidents (Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992), were experienced as 65% one week after the trauma, 25% two months later, and no symptoms (0%) nine months after the trauma. However, another research (Amir et al., 1996) showed contradictory results in which 66 PTSD diagnosed individuals experienced more severe PTSD symptoms with increased passage of time since trauma. Similarly, the study among injured trauma survivors (Shalev, Peri, Canetti, & Schreiber, 1996) considered whether symptoms change over time or remain the same among individuals with chronic PTSD. According to the results, PTSD patients did not develop new symptoms, but the initially expressed symptoms remained the same.

There is also a mutual relationship between passage of time and social support. It is claimed that the social support networks can be impaired over time. Some research results revealed that greater PTSD severity reduces social support resources (Kaniasty & Norris, 2008). Various research findings raised the question of the factors predicting recovery versus long-term chronicity. The longer the PTSD lasts, the role of event in explaining the symptoms becomes less important. Time seems to be needed to cope with negative aftermaths and to find meaning in the event. Therefore, rather than just considering the time passed since trauma, duration of symptoms and the processing carried out during that period seem to be a more essential factor in determining the outcome.

The prior experiences with stress and trauma influences and shapes the responses given to potentially traumatic events. Results of research with different samples also revealed that prior trauma exposure increases the probability of PTSD (Bremner, Southwick, Jonhson, Yehuda, & Charney, 1993; Galea et al., 2002). Being exposed to similar or other traumatic events, seperation from parents, poverty, lower education significantly predicted both exposure to trauma and PTSD (Breslau et al., 1991). Among people suffering from PTSD, the mean number of experiencing potentially traumatic events lifetime were reported as three (Darves-Bornoz et al., 2008). However, limited studies could not provide clear results about whether the cause of maladaptive responses to a particular trauma, thus PTSD, is related to being exposed to prior traumas or vulnerability factors such as personality, previous PTSD or any other preexisting mental health problem (Breslau, 2009). However, more recent results from a 30-year longitudinal study (Mulder, Fergusson, & Horwood, 2013) showed that being previously exposed to five or more traumatic or adverse life events were significantly related with higher PTSD symptoms. Moreover, the duration of symptoms was positively correlated with more impairment in functioning.

The traumatic event, initial reactions to the impact of the event and the severity of symptoms may cause disruptions and significant impairment in daily life functioning. Boals & Hathaway (2010) emphasized the importance of this criteria in distinguishing pathological/ non-pathological reactions given to stressful life events. The reactions given by the individual during the event and the perceived and

received social support in the aftermath of a traumatic event were also found to be related with PTSD and high levels of PTS symptoms severity (Amir & Sol, 1999; Frans et al., 2005).

In a Turkish sample, high levels of impairment of functioning and greater number of traumatic events experienced were related to high PTS symptom severity (Karanci et al., 2009).

1.2.3.3 Posttrauma factors; perceived social support, rumination, ways of coping

Perceived social support can be considered as another subjective variable similar to perceived severity of threat. Previous research indicated that social support reduced stress following a cancer diagnosis, provided positive life changes (Bozo, Gundogdu, & Buyukasik-Colak, 2009), and increased well-being emotionally (Holland & Holahan, 2003). Some other studies considered poor social support after a traumatic event as a risk factor for PTSD (Ozer et al., 2003). Some researchers focused on the changing direction of the relationship between social support and PTSD over time. Poor social support is found to be a risk factor for PTSD in the early times of coping with the adverse event, while over time (18-24 months after trauma) greater PTSD severity reduced social support resources (Kaniasty & Norris, 2008). Low levels of social support in the aftermath of traumatic events such as war or natural disasters, were found to be related to PTSD symptoms. A meta–analysis (Brewin et al., 2000) revealed that lack of social support was a significantly strong risk factor for PTSD (Perry et al., 1992) and higher levels of PTS symptoms severity (Amir & Sol, 1999; Frans et al., 2005).

One interesting point about the directionality of perceived social support is that among female adolescents exposed to interpersonal violence perceived support from friends was found to be related with increased distress (Springer & Padgett, 2000). This may be related to the type of event or the features of the age group. However, this does not change the consensus that perceived, not received, support directly leads to reliably better psychological health and helps the individual protect oneself in stressful situations (Kaniasty, 2005). In terms of correlations, perceived support and trauma exposure were found to be negatively correlated. This decline in perception of support following trauma in turn has been found to increase negative outcomes instead of its direct protective role.

Previous research findings supported the association between rumination and PTSD symptoms in the aftermath of traumatic events (Ehring, Frank, & Ehlers, 2008; Michael et al., 2007). Rumination and negative interpretations following grief reactions were found to be significant predictors of symptom severity (Boelen, van den Bout & van den Hout, 2003). In a study among ambulance service workers, rumination was found to be significantly related to symptom severity of PTSD and general mental health level (Clohessy & Ehlers, 1999). In other studies rumination was found to be associated with neuroticism (Segerstrom, Stanton, Alden, & Shortridge, 2003). Some studies found a positive correlation between neuroticism and negative repetitive thought, also between openness to experience and more searching repetitive thought (Segerstrom et al., 2003). Rumination was found to serve as a mediator in the association between neuroticism and depression (Nolan, Roberts, & Gotlib, 1998). In clinical studies, some evidence showed that ruminating in response to intrusions, not only give rise to intrusions (Laposa & Rector, 2012) but also leads individuals to overall PTSD (Clohessy & Ehlers, 1999). Previous research also indicated that intrusive memories may lead to a ruminative reaction, in turn to PTSD (Michael, et al., 2005). The negative feelings following rumination may also activate intrusive memories. In a bereavement study (Taku et al., 2008), intrusive rumination predicted psychological distress. In a cross-sectional study with woman suffering from breast cancer, Chan, Ho, Tedeschi and Leung (2011) found that negative event-rumination was positively related with PTSD symptoms. Cann and colleagues (2011) found that intrusive rumination is more related with avoidant coping style, whereas deliberate rumination was found to be related to seeking support coping style. Among a variety of cancer diagnosed patients (Morris and Shakespeare-Finch, 2011), trauma severity and intrusive rumination were found to be associated with distress (PTSD symptoms).

In terms of coping strategies used after exposure to traumatic events, the effects of different ways of coping were found to be related to PTSD (Norris et al., 2003; Sümer et al., 2005; Perkonigg et al, 2000; Breslau et al., 1991). Some research findings showed that problem-focused coping and social support seeking coping were effective strategies in reducing PTS levels (Ahern, Galea, Fernandez, Koci, Waldman, & Vlahov, 2004; Ozer et al., 2003), whereas emotion-focused coping and

particularly avoidant coping were found to be less effective in dealing with stressors and PTSD symptoms. However, in a study with a refugee sample, seeking support coping and emotion-focused coping were not clearly related to PTSD (Huijts, et al., 2012). The results of a recent study (Schuettler & Boals, 2011) revealed that avoidant coping, negative perspectives about the traumatic event (e.g., 'I don't see how bringing up the past can help me'), and maladaptive emotional reactions predicted PTSD symptoms. Meanwhile, positive coping (seeking support, religious coping), rather than self-blame and avoidant coping, among sexual assault survivors and combat, were found to be less related with PTSD symptom severity (Coffey, Leitenberg, Henning, Turner, & Bennett, 1996). Although some studies found no relation between positive coping and symptom severity, avoidant coping has been found to be related more with PTSD symptoms (Bleich, Gelkopf, & Solomon, 2003).

Coping strategies, by some theorists, were regarded as an inherent trait type that are not effected by other factors (Lazarus, 1993). Other findings revealed some related variables influencing the coping strategies. Social support can be regarded as a factor helping to recover from trauma by influencing the type of coping style utilized (O'Brien & DeLongis, 1997) where active support may influence efforts to manage the situation more easily. In a study with breast cancer patients, perception of high social support, increased positive reappraisal and engaging in problem-solving coping style, which in turn, improved emotional well-being (Holland & Holahan, 2003). Other studies found possible contributing roles of personality traits on coping strategies. Research in a community sample, showed that neuroticism is negatively correlated with direct coping, positively related with coping strategies involving escape response, self-blame and withdrawal. However, an unexpected research finding indicated (Charlton & Thompson, 1996) neuroticism as associated with both emotion-focused and more problem-focused coping. Meanwhile, extraversion was more associated with active coping (McCrae & Costa, 1986).

There are studies conducted to examine and understand the relationship between coping strategies and post traumatic stress symptoms versus growth. Aldwin et al. (1996) found that coping strategies mediated the relationship between trauma and both positive and negative outcomes. Similarly, a follow-up study and a longitudinal study found that dealing with a traumatic event by using problem-

focused coping were related with positive outcomes, whereas those using avoidance and emotion-focused coping were negatively related to experiencing positive outcomes (Aldwin et al.,1996; Moos & Schaefer, 1993; Mason et al., 2006). Therefore, it is essential to differentiate the pathways to negative versus positive outcomes. One of the positive outcomes after experiencing a traumatic event is claimed to be posttraumatic growth (PTG).

1.3 Posttraumatic Growth

Even when people are confronted with an extremely stressful event, they may perceive some positive sides out of this adversity (Calhoun & Tedeschi, 1999; Morris, Shakespeare-Finch, Rieck, & Newbery, 2005; Tedeschi & Calhoun, 2004). For some people, positive changes might occur in the aftermath of a traumatic event as a result of being able to cope/deal with the adversities posed by these events. The subjectively perceived positive psychological consequences as a result of a traumatic event is called Posttraumatic Growth (PTG) (Calhoun & Tedeschi, 1995; 1999).

PTG has been widely investigated in various populations and researchers named it differently such as 'adversarial growth' (Linley & Joseph, 2004), 'benefit-finding' (Affleck & Tennen, 1996), 'stress-related growth' (Park, Cohen, & Murch, 1996). PTG is a different concept from resiliency, optimism, sense of coherence or hardiness. These concepts are used more for indicating a successful adjustment to an adversity (O'Leary & Ickovics, 1995). However, PTG is more used for transformation of the individual while struggling or fighting with these adverse life events (Tedeschi & Calhoun, 1995; 2004) and with distress (Tedeschi, Park, Calhoun, 1998). Posttraumatic growth is evaluated as moving the individual one step further than one's previous state of functioning. Therefore, after the traumatic event the individual does not go back to previous psychological conditions but goes further (Janoff-Bulman, 2004).

PTG has been conceptualized either as an outcome of traumatic event (Schaefer & Moos, 1992; Tedeschi & Calhoun, 1995) or as a coping strategy (Affleck & Tennen, 1996).

The positive changes or transformations involve changes in the perception of self, changes in views about life, the world, spirituality and changes in interpersonal relationships (Tedeschi et al., 1998; Janoff-Bulman, 1992). Individuals may report

improved relationships, heightened sense of self, feelings of more strength, and developed coping abilities about life stressors, appreciation of life in general (Joseph & Linley, 2006; Tedeschi et al., 1998). These changes are summarized in five domains: (1) new possibilities, (2) spiritual change, (3) relating to others, (4) personal strength, (5) appreciation of life (Tedeschi & Calhoun, 1996). The individual may find new opportunities in life that were unrecognizable before trauma, such as new carrier paths, or new priorities. Further, individuals may improve their social relations and interactions with others, also may become aware of the support around them. Growth involves viewing and approaching oneself in a different way, because of seeing others and the world in a different way, too. This is conceptualized as ‘‘a life learning process’’ where changes occur in identity and relations with others (Sumalla, Ochoa, & Blanco, 2009). When people realize they can cope with the adverse event and survive, they may also become more self-reliant and believe in themselves more strongly. The experience of a traumatic event may change the individuals' value system in that they may value life, people, God more and appreciate every day for living. However, this may be two-sided; on one hand, people may appreciate God, improve the relation in between and thank for living. On the other hand, people may get challenged by the traumatic experience and may get involved in a more existential world where they question the deeper levels of religiousness and spirituality (Tedeschi & Calhoun, 2004).

After the focus of research on consequences of traumatic events has shifted from negative to positive outcomes, results revealed that the prevalence rates of experiencing positive changes and growth after diagnosis of HIV/AIDS ranges between 59% and 83% (Milam, 2006) and in cancer survivors between 60% to 90% (Collins, Taylor, & Skokan, 1990).

The empirical research on growth also emphasize the interaction between personality, cognitive appraisal, and coping activity in shaping growth experiences (Armeli, Gunthert, & Cohen, 2001; Linley & Joseph, 2004; O'Leary & Ickovics, 1995; Park, 1998; Schaefer & Moos, 1992; Tedeschi & Calhoun, 1995; Waysman, Schwarzwald, & Solomon, 2001). In trying to understand the complicated nature of PTG controversial explanations for the contributing factors, thus differing conceptualizations and theoretical models of PTG have been evolved.

1.3.1 Models of PTG

Two main theories that approached PTG as an outcome have been (1) Schaefer and Moos (1992) Model of Life Crises and Personal Growth (2) Functional Descriptive Model (Tedeschi and Calhoun, 1995; 2004).

Schaefer and Moos (1992), proposed a model (see Figure 2) on the factors of positive changes and adjustment following life crises. According to the model, the main determinants of the positive outcome (i.e., PTG) are; pre-trauma factors (i.e., individual and environmental system resources), event-related elements (i.e., type of trauma, severity, duration, timing, impact on individual) and posttrauma factors (i.e., coping responses and cognitive appraisal processes). All factors have impacts on one another. The environmental system resources include support from family, friends and others, financial resources, other conditions of living. The personal system factors include sociodemographic features, resilience, optimism, health status, prior crises.

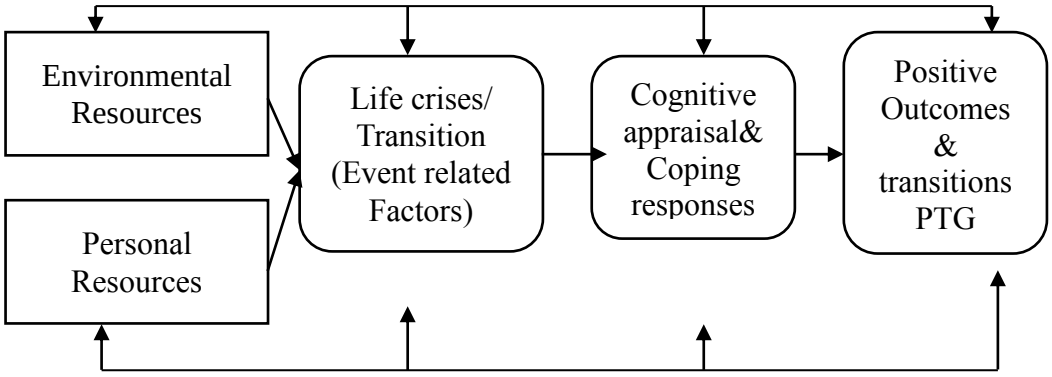

Figure 2 Model of Life Crises and Personal Growth (Schaefer and Moos, 1992;1998)

The Functional Descriptive Model of PTG, as seen in Figure 3, is composed of a variety of factors affecting the process of PTG (Tedeschi & Calhoun, 2004). The main factors can be summarized as the individual's pretrauma factors such as personality, schemas or assumptions about self, others and the world; challenges after the traumatic event such as talking and sharing emotions (self-disclosure);

social support; cognitive processing (i.e., rumination). Tedeschi and Calhoun (2004) used the metaphor of 'seismic' event in order to explain the devastating nature of traumatic events. According to this model, the event shakes and challenges individual's schemas and beliefs just like an earthquake shakes the buildings. If this event or struggling with the painful sides of the event, activates the survivor's cognitive processes, then PTG can be experienced. Tedeschi et al. (1998) in their model of PTG, regarded rumination as an important facilitator to PTG. The model claims that this cognitive processing involves two stages of event related rumination. At the early stages of response to traumatic event, ruminations evolve automatically and involuntarily just like intrusions. This intrusive rumination is seen in short period of time following the event and is unexpected and unintentional. However, later event related ruminations become more intentionally initiated and individual deliberately processes the event which lead to search for meaning, thus to PTG. Therefore, deliberate rumination is voluntary and intentional as if trying to cope with or handle the suffering from extremely challenging life events (Calhoun & Tedeschi, 2006). These efforts of the individual to reprocess the event to find meaning is claimed to lead to adaptive changes of schemas (Prati & Pietrantoni, 2009). This adaptive kind of rumination (i.e., deliberate) involves more concrete 'how' questions, where attention is more on the actual experience and related cognitions. If the individual can accomplish that, then this process may facilitate the coping process and lead the individual to benefit from the event (Affleck & Tennen, 1996; Taku et al., 2008), thus experience some form of PTG (Cann et al., 2011).

This model (Tedeschi and Calhoun, 2004) regards this process as 'grief work' because it takes time to accept the loss in the traumatic event. If the distress is intense during this period, then this is assumed to maintain the cognitive work necessary to process the event and develop PTG. This does not necessarily mean that PTG occurs if the distress becomes weaker, but distress level should be manageable in order to foster PTG. According to this model, PTG is a necessary outcome of the emotional distress and schema disruption after an adverse life event, where deliberate rumination reduces the effects of emotional disturbance. The functional-descriptive model of PTG (Tedeschi & Calhoun, 1995; 2004) reported that the ability to manage emotional distress is necessarily important in the early stages following trauma, but

later PTG reflects more essential positive changes in life (Tomich & Helgeson, 2004). This approach regarded PTG as a long-term positive change which is a result of utilizing problem-focused coping (Tedeschi et al., 1998). This Functional Descriptive Model also emphasizes the mutual social support, where the individual needs the support of significant other who can encourage the trauma survivor to share and relieve from negative emotions and grow. However, Wortman (2004) claimed that available social environment may not always be supportive and encouraging, but rather may inhibit growth.

1.3.2 Literature Findings Related to Factors Associated with Posttraumatic Growth

1.3.2.1 Pre-trauma factors: socio-demographic variables, personality factors

Although many studies seem to reach a consensus that being female (Bellizzi, 2004; Milam, 2006), being married, low educational and income level (Tomich & Helgeson, 2004; Weiss, 2004), and being young (Linley & Joseph, 2004; Milam, 2006; Widows, Jacobson, Booth-Jones, & Fields, 2005) positively correlate with PTG (Bellizzi & Blank, 2006), many other studies contradict the directionality of these results.

In some studies with cancer survivors, for example, being old was found to be positively related to PTG (Bellizzi, 2004) and no significant relation was demonstrated between gender and PTG (Lechner et al., 2003; Widows et al., 2005). This result was assumed to be related to the differences in the types of traumatic events studied.

In a study examining the long-term effects of postwar in Israeli community (Kimhi, Eshel, Zysberg, & Hantman, 2010), age was found to be negatively related with PTG (Laufer & Solomon, 2006). Several studies in contrast showed a positive relation between age and PTG (Milam, 2006). A meta-analysis including 70 studies (Vishnevsky et al., 2010), showed that women reported significantly higher levels of PTG with increasing age. Karanci et al., (2009) found in Turkish community sample that young age, low education and income, being married were related with PTG.

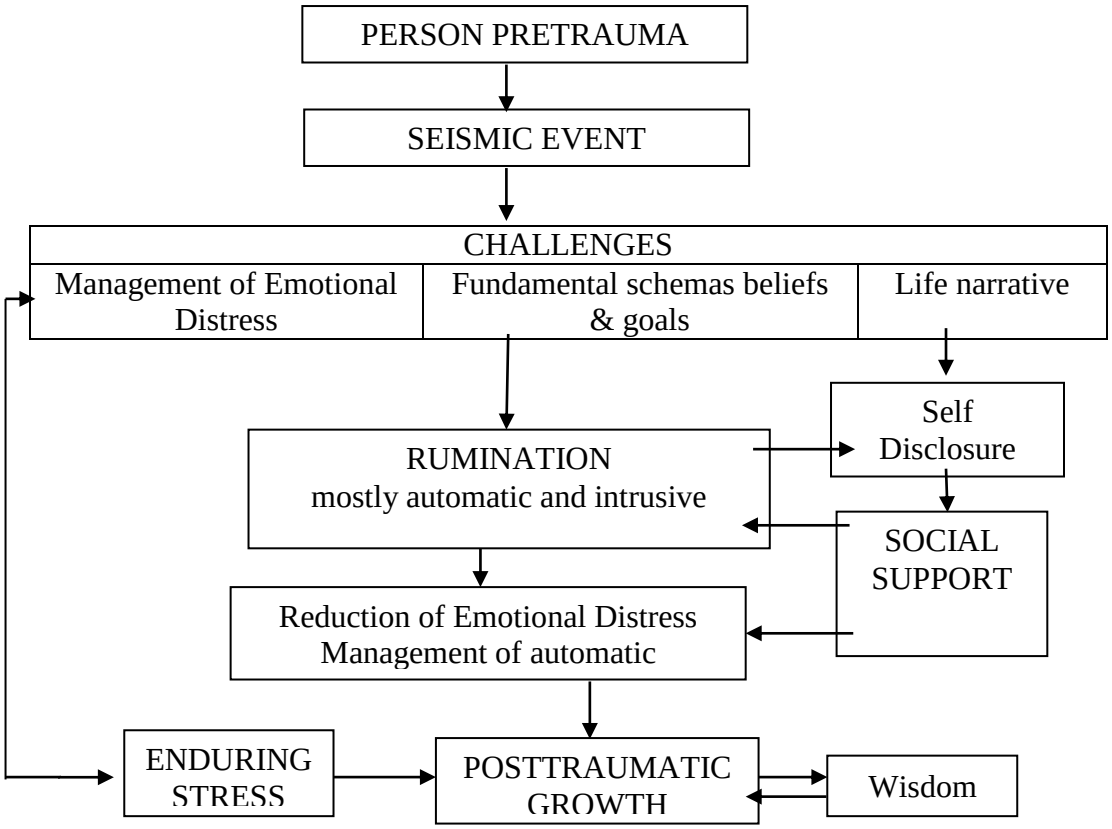

Figure 3 Model of PTG (Tedeschi & Calhoun, 2004)

Some positive personality traits like flexibility, optimism, extraversion, being open to new experiences, ability to learn from experiences, and creativity may protect the individuals from negative consequences and thus are more likely to lead to growth. Previous studies on the relationship between optimism and PTG have shown a small to moderate correlation (Affleck & Tennen, 1996; Curbow, Legro, Baker, Wingard, & Somerfield, 1993). Tedeschi and Calhoun (1996) found a small, but significant correlation between openness and PTG. In contrast to previous studies that found a positive relationship between PTG and optimism and openness, Zoellner, Rabe, Karl, & Maercker (2008) found no significant correlations between them. Val and Linley (2006) found that posttraumatic growth and positive changes were significantly associated with extraversion. According to Wilson and Boden's (2008) research results, extraversion predicts PTG, whereas openness to experience

and agreeableness predicts PTG via religiosity. As expected neuroticism was not significantly related with PTG (Lechner et al., 2003) but extraversion served as a protective trait that facilitates access to social support and sharing. Likewise optimism and hope (Bozo et al., 2009) were presumed to elevate the probability of getting social support, and increase positive coping strategies (Widows et al, 2005) with positive reappraisal of event, thus and increase in PTG (Bozo et al., 2009; Cordova, Cunningham, Carlson, & Andrykowski, 2001). Shakespeare-Finch (2002) carried out research on emergency professionals in order to examine the relationship between personality and PTG. The findings revealed that personality traits such as openness to experience, extraversion, agreeableness, conscientiousness were not direct indicators of PTG, rather this relationship was mediated by coping strategies.

The results of a community study of traumatic events and their consequences in Turkey (Karanci et al., 2009) revealed that agreeableness, openness, and conscientiousness were related positively to most of the PTG domains. Neuroticism was related negatively to spiritual change. The charateristics of the individuals are assumed to change the processing of trauma, thus the outcome. For example, the individuals who were more open to experience and high in agreeableness, were expected to reprocess the event rather than avoiding it, seek and reach social support which are facilitating factors for PTG.

1.3.2.2 Trauma-related factors: type of the event, impact of event (peritrauma severity), time since the event, number of prior events

Posttraumatic growth can also be influenced by the type of trauma experienced. In a variety of studies, PTG and positive transformations have been reported after suffering from highly challenging life events including disasters (McMillen, Smith, & Fisher, 1997; Karanci & Acarturk, 2005, Karanci et al., 2012), motor vehicle accidents (Zoellner et al., 2008; Nishi, Matsuoka, & Kim, 2010; Shakespeare-Finch & Armstrong, 2010), terrorist attacks (Park, Aldwin, Fenster, & Snyder, 2008), stroke (Gangstad, Norman, & Barton, 2009), life-threatening illnesses (Sawyer, Ayers, & Field, 2010), loss of a loved one (e.g., Davis, Michael, & Vernberg, 2007; Taku et al., 2008; Karanci et al., 2012), rape survivors (Burt & Katz, 1987), male cardiac patients (Affleck, Tennen, Croog, & Levine, 1987). The event types such as birth, death, and physical health were more likely to lead to growth

than events such as sexual abuse, or harassment (Ickovics et al., 2006). Likewise, the findings of Shakespeare-Finch & Armstrong's (2010) study showed that PTG was reported among bereaved individuals more than as a result of experiencing sexual assault and motor vehicle accidents. However, there are other studies that found no relationship between the type of event and growth (Aldwin, Sutton, & Lachman, 1996; Park et al., 1996), concluding that independent of the type of event, PTG is suggested to be the result of the struggle with the event (Tedeschi & Calhoun, 1995).

As indicated by PTG theory (Tedeschi & Calhoun, 1995) and research results time is needed in order for PTG to occur (Joseph & Linley, 2005; Tedeschi & Calhoun, 1995; 2004; Patterson, Carrigan, Qestad, & Robinson, 1990). However, some studies indicated that participants showed positive changes even after 2 weeks after a traumatic event (Frazier, Conlon, & Glaser, 2001). Similarly, the findings of McMillen et al., (1997) revealed that growth was expressed immediately after 4-6 weeks of trauma among survivors of disasters. However, this gradual increase have been claimed to decrease after some time and further, the results showed a corresponding increase in distress (Davis, Nolen-Hoeksema, & Larson, 1998). This distress or suffering is claimed to be needed for real growth to take place. Further work also needs to clarify the impact of both time and type of traumatic event on PTG (Calhoun & Tedeschi, 1998; Polatinsky & Esprey, 2000). Other studies proposed that longer intervals between the traumatic experience and PTG assessment would predict higher levels of PTG (Helgeson, Reynolds, & Tomich, 2006), in particular for PTGI factors of new possibilities and appreciation of life. However, a significant relationship was not found between the period of time that elapsed since the traumatic event and PTG (Cohen, Cimbolic, Armeli, & Hettler, 1998; Curbow et al., 1993; Lechner et al., 2003; Widows et al., 2005). The amount of reported growth has been stable by the time the assessment took place, so more time would not be necessarily associated with more growth. Steel, Gamblin, & Carr (2008) found that PTGI scale scores were the highest at the time of diagnosis of hepatobiliary carcinoma except for appreciation for life. They concluded that posttraumatic growth occurs primarily at the time of diagnosis and is a stable construct once it occurs in.

It is assumed that one of the critical part determining the outcome of experiencing a traumatic event is the acute psychological reactions after the

traumatic event. Calhoun & Tedeschi (2006) proposed that the higher the perceived threat, the greater disruption to one's assumptive world, which in turn, increases levels of PTG. Both the perceived severity of the event (Aldwin et al., 1996; Tedeschi & Calhoun, 1996) and the immediate stressfulness of the event predicted growth significantly (Park et al., 1996; Lechner et al., 2003). In contrast to studies that reported a positive relation between perceived severity of event and PTG, a study (Kimhi, Eshel, Zysberg, & Hantman, 2009b) found a negative relation between severity (war) and growth.

1.3.2.3 Posttrauma factors; social support, rumination, coping

In terms of the role of social support, a study carried out by Park et al. (1996), revealed that over six months, those who perceived high and satisfactory social support, reported high levels of PTG. However, there are inconsistent research findings between social support and PTG. Some studies found a positive correlation with individual's social support opportunities and PTG, among bereaved HIV/AIDS caregiver sample (Cadell, Regehr, & Hemsworth, 2003) among breast cancer patients (Karanci & Erkam, 2007), while other studies found no significant relation between social support and PTG (Sheikh, 2004; Widows et al., 2005; Weiss, 2004). Sheikh (2004) assumed that trauma survivors used social support as a promoter for cognitive processing. Another research stated that at first although social support was perceived to be unpleasant, later in time social support became more beneficial for ruminators primarily to help them avoid depression (Nolen-Hoeksema & Larson, 1999) and feelings of helplessness. The consistency and stability of social support has been another factor for promoting PTG. In a study among breast cancer survivors (Cordova et al., 2001), when social support inhibited sharing or discussion of trauma related issues, it inhibited cognitive processing, thus impeded the opportunity of positive transformations. The relationship between perceived social support and PTG was mediated by approach coping and helplessness/hopelessness (Lechner et al., 2003). When perceived social support is high, then it is assumed that the individual has a social network to disclose their traumas and expressing and sharing emotions help the individual process the event, understand, make sense and find alternative ways of coping (Lepore & Revenson, 2006), thus promote PTG.

Since intrusive thinking indicated some form of ongoing cognitive processing, it is proposed that some intrusive thinking impedes cognitive processing while others facilitate (Siegle, Moore, & Thase, 2004). In their study, rumination, both deliberate and intrusive rumination were reported to be more likely to be engaged by women than by men. Stockton, Hunt, & Joseph (2011) showed a negative relation between intrusive rumination and PTG, indicating the less the individual engages in intrusive rumination, the more growth will be experienced. Deliberate rumination was found to be significantly associated with growth only if the association of intrusive rumination was controlled. The results of the same research, with a second study among individuals exposed to a recent traumatic event, showed that deliberate rumination was the only significant predictor of PTG. A longitudinal study (Kilmer & Gil-Rivas, 2010) reported a significantly positive relation between two types of rumination and PTG.

The results of a meta-analysis (Helgeson et al., 2006) indicated that after experiencing a range of traumatic events (sexual assault, natural disaster, bereavement, childhood abuse, and illness), PTG was associated more with intrusive thinking about the event. Research findings from different populations of bereaved college students (Taku et al., 2008), stroke (Gangstad et al., 2009), and colorectal cancer (Salsman, Segerstrom, Brechting, Carlson, & Andrykowski, 2008) showed that deliberate rumination predicted PTG. In terms of gender, women engaging in rumination in either type (particularly deliberate rumination), reported higher levels of PTG because the effort to cope with a traumatic event, is claimed to facilitate recognizing beneficial sides of the event (Vishnevsky et al., 2010). In a cross-sectional study with breast cancer survivors, Chan, Ho, Tedeschi and Leung (2011) found that positive event-related rumination positively related to PTG.

Although many more studies showed the relationship between deliberate rumination and PTG (Calhoun et al., 2000), contradictory findings showed evidences for the unnecessity of cognitive processing for PTG. In most of the studies, they found that processing the trauma or searching meaning did not help individuals get better but rather made them worse (Bonanno & Kaltman, 1999).

A study with a sample of hurricane-exposed women (Bosson, Kelley, & Jones, 2012) showed that deliberate cognitive processing fully mediated the relation

between religious coping and posttraumatic growth, suggesting that only positive religious coping could not directly facilitate PTG, while deliberate processing of the traumatic event might lead to PTG. It is suggested that positive religious coping might have an effect on externalizing the responsibility which in turn predicts PTG.

Morris and Shakespeare-Finch (2011) examined the links between PTG and perception of diagnosis severity, rumination, social support, distress (measured by PTSD symptoms) among a variety of cancer diagnosed patients. According to the results, deliberate rumination and social support were directly related to PTG. It is proposed that through deliberate rumination, the traumatic event becomes more manageable, the individual finds out ways of coping, and lead to evaluate one's resources as sufficient (Calhoun & Tedeschi, 2006).

Recent research suggested coping as a key factor on the pathway to PTG (Bussel, & Naus, 2010; Zoellner & Maercker, 2006). Approaching the stressor by active coping strategies (e.g., problem focused coping) was found to be significantly related with PTG (Urcuyo, Boyers, Carver, & Antoni, 2005; Collins et al., 1990; Widows et al, 2005), whereas avoiding the stressor by distancing and escape coping strategies has little (Collins et al., 1990) or no impact (Widows et al., 2005) on PTG. In addition to problem-focused coping's contribution to PTG, a recent study (Schuettler & Boals, 2011), emphasized the role of positive attitudes toward the event such as believing that 'working on emotions is a healthy process'. As specific to cancer patients, approaching and fighting with the disease was positively correlated with PTG, while feelings of helplessness/ hopelessness with fatalism was negatively related with PTG (Lechner et al., 2003). Seeking support coping (Linley & Joseph, 2004) has been proposed as another coping style that facilitates PTG over time. Positive coping (seeking social support, religious coping), rather than self-blame and avoidant coping, among sexual assault survivors and combat, were found to be related more with PTG (Frazier et al., 2001). It is suggested by Park (2004) that positive coping helps the individual make meaning, facilitate struggling, and become aware of positive outcomes, thus grow. Moreover, adaptive coping processes such as religious coping (Park et al., 1996) and spirituality coping (Urcuyo et al., 2005; Cadell et al., 2003) were found to be significantly associated with enhanced PTG. A meta-analysis (Prati & Pietrantoni, 2009) and other research findings (Gerber, Boals,

& Schuettler, 2011) indicated that positive religious coping, through motivating the individuals' efforts to continue to cope by providing relief from feelings of helplessness, facilitates PTG. The research findings concluded that individuals are more likely to benefit after trauma, if they have connection to spiritual beliefs and practices, if they have support from family and friends and if they experience high levels of distress.

1.3.2.4 The Association between Posttraumatic Stress Symptoms Severity and PTG

Although many studies have consensus that PTG is related to stress symptoms (Helgeson et al., 2006; Kilmer et al., 2009), the findings are contradictory about the direction of this relationship. The results showed a significant positive direct effect of experiencing more stress (avoidance, intrusions, depression) leading to more growth (Cadell et al., 2003). However, it was claimed that this positive relationship lessens or changes in direction over time (Frazier et al., 2001). In a study examining the long-term effects of postwar in an Israeli community sample (Kimhi et al., 2010), findings revealed that there is a negative correlation between stress symptoms and PTG (Linley & Joseph, 2004; Urcuyo et al., 2005). The meta-analysis (Sawyer et al., 2010) from 38 studies indicated that individuals perceiving PTG in the aftermath of cancer or HIV/AIDS, reported decreased levels of negative mental health symptoms, decreased levels of PTSD symptoms. Some other research results indicated no significant relation between PTG and distress (Cordova et al., 2001). Tomich and Helgeson (2004) have claimed that PTG and distress can coexist. Distress is claimed to facilitate the initiation and maintenance of posttraumatic growth. According to Kilmer & Gil-Rivas (2010) PTG has a predictive value of posttraumatic stress symptoms over time.

Several studies have demonstrated that those who experienced higher levels of stress or threat, reported greater PTG (Linley & Joseph, 2004; Weiss, 2004). The relation between PTSD and PTG was studied by Joseph and Linley (2005). The three symptoms of PTSD (reexperiencing, avoidance, and arousal) were viewed as a search for meaning in life following traumatic events. It was claimed that the event destroyed assumptions about the self and the world and people tried to process the current trauma-related information and reconstruct. This in turn predicted decreased

distress if the individuals have the capacity to overcome the overwhelming negative consequences of trauma by exploring new meanings. In a sample of sexual assault survivors, over a 12 month-period, those who reported PTG were the ones that felt less distressed (Frazier et al., 2001). However, this does not lead to a direct conclusion that decreased levels of distress automatically leads to PTG (Joseph & Linley, 2006). Therefore, an important implication is that the symptoms of PTSD should not just be seen as factors to be eliminated, but rather can be taken as an expression of the struggle of individuals' attempt to understand and process the trauma, and a potential to grow (Zoellner & Maercker, 2006).

One interesting finding is that the higher levels of intrusions in particular are associated with higher levels of posttraumatic growth. Some research (Creamer, Burgess, & Pattison, 1992) proposed that intrusions are necessary and expected part of adaptation to stressful life events where cognitive processing of the experience takes place. In agreement with this proposal, research showed that intrusion subscale is related to growth following traumatic events (Morris et al., 2005; Helgeson et al., 2006; Linley & Joseph, 2004). Another pathway found that intrusion symptoms of PTSD were though negatively correlated with PTG, interestingly positively correlated with both types of ruminations (Stockton et al., 2011).

However, studies (Janoff-Bulman & Frantz, 1997; Tedeschi & Calhoun, 1995) agreed that life disruption is a necessary condition for PTG to occur, where core beliefs and assumptions are challenged enough to activate processing to search and find meaning. Tedeschi and Calhoun (2004) also suggested that both the intrapersonal factors such as personality traits of extraversion and openness to experience, and interpersonal factors such as environment-support have impact on adapting to cognitive processing.

In their review Zoellner & Maercker, (2006) summarized the inconsistencies in the relationship between PTG and PTSD symptoms based on the measures and methods used in the research studies. Cross-sectional studies mostly found no significant relationship between PTG and PTSD. If the measures of PTG was standardized scales (such as PTGI or Stress Related Growth Scale-SRGS), then the association with PTSD was either in positive direction or no relation has been reported. On the other hand, if the PTG levels are assessed through interviews or

scales constructed by the researchers, then they found a negative association between PTG and PTSD.

What factors may promote PTG? is a very critical question. If these factors could be determined, then it would be easier to plan a more effective intervention for people having a traumatic event experience in psychosocial manipulations and in treatment. In conclusion, in order to better understand underlying mechanisms of the impacts of traumatic life events, more sophisticated models should be tested.

1.4 The Purpose of this Study

Experiencing a traumatic event seems to have different consequences for different individuals. Some may cope and overcome these traumatic events without showing much response whereas some others cannot and develop serious psychological distress reactions, and yet some others show both distress and growth. Therefore, the question of 'which factors determine the outcome of these traumatic life events?' becomes important and should be examined. The purpose of this study is to test different predictors leading to different consequences, namely either negative outcomes i.e., posttraumatic stress symptoms versus positive outcomes such as posttraumatic growth, within the same sample.

Many studies on PTSD have been implemented around the world, however there have been relatively few studies in Turkey on the prevalence of different kinds of traumatic events, probable PTSD and PTG. The previous studies have mostly focused on the consequences of special populations (e.g., survivors of earthquakes, cancer, accidents) or specific type of event (e.g., illness, bereavement), while different types of traumatic events with both negative and positive consequences were not widely studied within the same samples. Karanci et al. (2009) examined the prevalence rates of various types of traumatic events and probable PTSD, and PTG levels (Karancı et al., 2012) in a representative community sample of adults from 3 provinces of Turkey, namely Ankara, Erzincan and Kocaeli. Sociodemographic variables (age, gender, SES, etc.) and personality characteristics of the participants were also analyzed as possible predictors of PTSD and PTG.

The current study focuses on prevalence rates of different types of traumatic events, probable PTSD and PTG from a different province which is located in the west coast of Turkey, on the seismic zone, İzmir. In addition to that, the study also

examined a proposed model where PTG models and the predictors of PTSD and PTG were analyzed within the same community sample.

This study provided the opportunity to test trauma related factors together with the more individual-specific psychological factors at the same time. Previous research have consensus on that rather than the traumatic event itself, the individual's processing style has more influence on the outcomes at the end (Aldwin et al., 1996). Therefore, the present study examined the effects of sociodemographic characteristics, personality, perceived social support, coping strategies, event-related rumination as potential factors determining participants' posttraumatic stress symptoms versus post traumatic growth levels.

To sum up, this study aims to understand the mechanisms underlying PTS symptoms and contributing factors of PTG. These results will give important information in order to define risk groups following a variety of traumatic events and help to understand more clearly the mechanisms of traumatic consequences. The results will also provide valuable information for mental health care professionals in explaining the mechanisms of experiencing growth after trauma.

1.4.1 The Proposed Model

In this study, in order to examine the comprehensive research purposes, the conceptually-relevant variables related with both posttraumatic stress symptoms and PTG via combination of Parkinson's (2000) and Schaefer & Moos' (1992) models will be tested. Additionally, these models will be extended with Tedeschi and Calhoun's (2004) model proposing the effect of event-related rumination in particular. The proposed model can be seen in Figure 4.

Since trauma and traumatic events are widely studied, their consequences and the underlying mechanisms have captured much attention accordingly. In this study, among peritrauma factors event-severity, among posttrauma factors perceived social support following trauma, event-related rumination styles used for processing, and coping strategies utilized to overcome the traumatic event were area of interest in particular. Moreover, among pretrauma individual resources personality traits were examined. These factors in question were evaluated within the same representative community sample as leading to differential outcomes such as posttraumatic stress symptoms and/or posttraumatic growth through differential pathways.

1.4.1.1 Research Questions (RQ)

RQ1: What is the prevalence of experiencing different types of potentially traumatic events (PTEs) and events qualifying as traumatic events (TEs) according to DSM-IV-TR Criteria A?

RQ2: Are there gender differences in experiencing different types of events as most distressing and as qualifying for being traumatic (i.e., meeting Criteria A)?

RQ3: What is the prevalence rate of having probable PTSD in an adult community sample?

RQ4: How does gender, types of traumatic events and sociodemographic factors affect having probable PTSD?

RQ5: What are the roles of sociodemographic factors, personality traits, event-related variables and posttrauma factors on posttraumatic stress symptom severity?

RQ6: What are the roles of sociodemographic factors, personality traits, event-related variables and posttrauma factors on developing PTG?

RQ7: What are the pathways to PTS symptom levels and PTG levels?

RQ8: Is there a relationship between PTS symptom severity and PTG?

1.4.1.2 Hypotheses of this Study

The hypotheses of this study are grouped into two main categories as given below. The first group of hypotheses (H) that were examined via descriptive analyses, group comparisons, and regression analyses, are given below:

PTEs, TEs, Probable PTSD

H1: Types of events qualifying as traumatic event TE will be significantly different for females and males.

H2:. Females will have higher probable PTSD than males.

H3: Being female, single, younger, having lower income and education level, previous psychiatric problem, greater number of previous negative events will be significantly associated with having probable PTSD.

H4: Different types of traumatic events will lead to experience different symptoms of PTSD; i.e., intentional/assaultive violence group of events will increase reexperiencing symptoms, whereas other group of events (divorce, financial problems etc.) will lead to experience more avoidance symptoms.

Variables associated with Symptom Severity

H5: Being female, young, lower income level, previous psychiatric problem, neuroticism, experiencing intentional/assaultive violence type of events, greater impairment in functioning, longer duration of symptoms, less time elapsed since trauma, intrusive rumination, fatalistic coping, helplessness coping will be positively related to symptom severity.

Variables associated with PTG

H6: PTG domains will be effected differently according to the type of traumatic event specified as most distressing.

H7: Being female, young, agreeableness, extraversion, concientiousness, sudden death and other event types (such as life-transition problems), more time elapsed since trauma, less duration of symptoms, higher perceived social support, deliberate rumination, problem solving coping and seeking support coping will be significantly related to PTG.

Second group of hypotheses are related to the proposed model which were examined via structural equation modeling. This model would outline three main factors (i.e., pretrauma factors, peritrauma factor and posttrauma factors) determining two differing outcomes such as PTS symptom severity and Posttraumatic Growth. Among pretrauma factors personality traits (neuroticism, agreeableness, openness to experience, extraversion, conscientiousness, negative valence), among peritrauma factor event-related severity, and among posttrauma factors perceived social support, deliberate rumination, intrusive rumination, emotion-focused coping (helplessness coping, fatalism coping), active coping (problem-focused coping, seeking support coping) were examined as constructs influencing both negative and positive outcomes through different pathways. The hypotheses (H) of this model are presented below.

Pretrauma Factor: *Personality*

H8: Neuroticism will be positively related with event-severity, intrusive rumination and emotion-focused coping.

H9: Other personality (extraversion, conscientiousness, agreeableness, openness to experience, negative valence) traits will be negatively related to event-

severity, positively related to perceived support, deliberate rumination and active coping.

Peritrauma Factor: *Event-related severity*

H10: Event-related severity will increase both intrusive and deliberate rumination.

H11: Less event-related severity will lead to perceiving higher levels of social support.

Pretrauma Factor *Peritrauma Factor* *Posttrauma Factors* *Outcome*

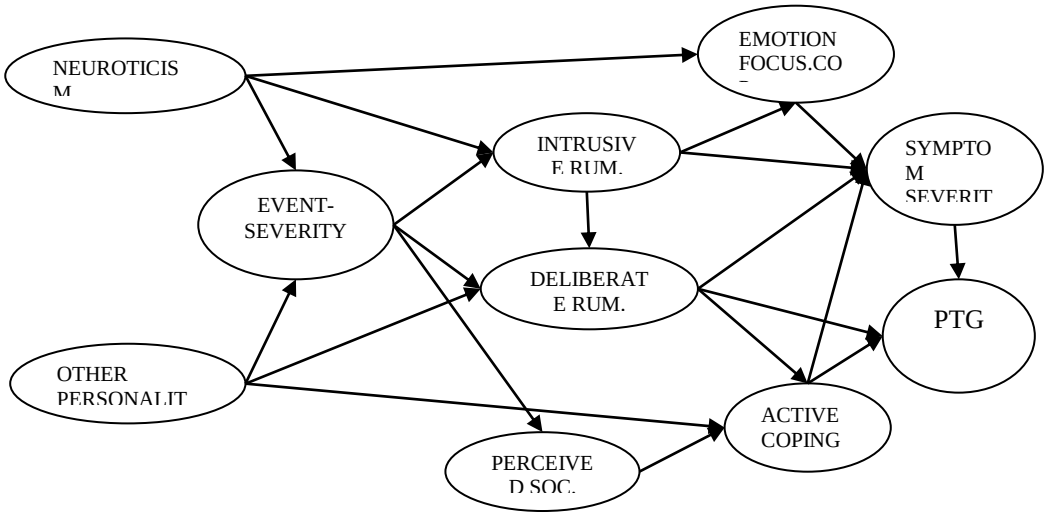

Figure 4 The Proposed Model

Posttrauma Factor

Perceived Social Support

H12: Higher levels of perceived social support will increase engaging in more active ways of coping.

Rumination:

H13: Intrusive rumination will be positively related to deliberate rumination and PTS symptoms severity.

H14: Intrusive rumination will increase engaging in emotion-focused coping strategies, thus lead to greater symptom severity.

H15: Deliberate rumination will significantly predict higher PTG levels and lower symptom severity.

H16: Deliberate rumination will increase engaging in active coping strategies, thus lead to higher PTG.

H17: Neuroticism will increase engaging in intrusive rumination, which in turn, increase symptom severity.

H18: Other-personality traits will increase engaging in deliberate rumination, which in turn increase levels of PTG.

Ways of Coping:

H19: Emotion-focused coping strategies will predict higher posttraumatic stress symptoms severity.

H20: Active coping strategies will increase levels of PTG and decrease symptom severity.

H21: Neuroticism will increase engaging in emotion-focused coping, which in turn, will increase symptom severity.

H22: Other-personality traits will increase engaging in active coping, which in turn increase levels of PTG and decrease symptom severity.

PTS symptom severity- PTG

H23: Higher symptom severity will predict higher levels of PTG.

CHAPTER 2

METHOD

2.1 Sample

A total of 740 adult subjects, residing in İzmir participated in this study. The acceptance rate was 61.35%, and for those 286 participants (38.65%) that rejected to participate or were unreacheable, primary and secondary optional addresses were visited.

Among the subjects that participated in the study, 476 (64.3%) were females and 264 (35.7%) subjects were males. The mean age of the participants was 43.19 (*SD* = 15.17, Minimum 18, Maximum 85). In terms of their marital status, 508 (68.6%) of the participants were married. Two hundred and fifty one (33.9%) participants were primary school graduates, 199 (26.9%) graduated from high school, and 128 (17.3%) graduated from university. The sample consisted of 242 (32.7%) employed people, 498 (67.3%) unemployed people. 230 (47.1%) females out of 476 female sample were housewives. In terms of montly income levels, 416 (56.2%) participants reported middle-income level. One hundred and nine (14.7%) participants had no health insurance coverage.

In addition to these, the participants' mental health history was examined; one hundred and four (14.1%) participants reported a previous psychiatric problem within the last 2 years, among them 83 (11.2%) participants received treatment and 49 (6.6%) of the participants reported an ongoing-treatment.

The socio-demographic characteristics of the participants are presented in Table 1.

Table 1 Demographic characteristics of the sample (N = 740)

Variables	Frequency (%)	Mean (SD)
Age		43.19 (15.17)
Education (years)		8.83 (4.24)
Sex		
Female	476 (64.3)	
Male	264 (35.7)	
Marital Status		
Single	138 (18.6)	
Engaged	6 (0.8)	
Married	508 (68.6)	
Widowed	61 (8.2)	
Divorced	20 (2.7)	
Employment Status		
Employed	242 (32.7)	
Unemployed	498 (67.3)	
***If unemployed,* Reason of Unemployment**		
Housewife	230 (31.1)	
Retired	131 (17.7)	
Unable to find a job	31 (4.2)	
Student	45 (6.1)	
Income Earner	3 (0.4)	
Disabled/illness	16 (2.2)	
Other	32 (4.3)	
***If employed,* Work Status**		
Salary based employee	138 (18.6)	
Paid per work	14 (1.9)	
Owner	36 (4.9)	
Self employed	38 (5.1)	
Unpaid family worker	2 (0.3)	
Health Insurance		
Yes	630 (85.1)	
No	109 (14.7)	
Monthly Income Level*		
Very low	68 (9.2)	
Low	209 (28.2)	
Middle	416 (56.2)	
Upper-middle	40 (5.4)	
High	6 (8)	
Psychiatric Problem		
No	633 (85.5)	
Yes	104 (14.1)	
***If yes,* Treatment Type**		
Psychological Treatment	9 (1.2)	
Medication	74 (10)	
No treatment	5 (0.7)	
Current Treatment		
Yes	49 (6.6)	
No	35 (4.7)	

*Income levels; based on responses to a five points scale item (1=very low, 5= high)

2.2 Instruments

Data was collected via a research booklet developed for the purposes of the present study. The research booklet consisted of a socio-demographic information form and the standardized self-report measures including the Posttraumatic Stress Diagnostic Scale, the Event-Related Rumination Inventory, the Posttraumatic Growth Inventory, the Basic Personality Traits Inventory, the Ways of Coping Scale, the Multidimensional Scale of Perceived Social Support.

2.2.1 The Sociodemographic Information Form

The Sociodemographic Information Form has been developed in order to obtain some basic information about the participants' demographic characteristics (age, sex, education level, marital status), income level (rated on a five points scale, 1=very low, 5= high), work status (employed-if yes; status, unemployed- if yes; reason of unemployment), health insurance and previous psychiatric problem (if yes; type of treatment history, and current treatment) (see Appendix A).

2.2.2 The Posttraumatic Stress Diagnostic Scale (PDS)

The Posttraumatic Stress Diagnostic Scale (PDS) is a self-report instrument, developed by Foa, Cashman, Jaycox, and Perry (1997), to assess the severity of posttraumatic stress symptoms, mainly to facilitate reliable diagnosis of PTSD based on the criteria of the DSM-IV-TR (APA, 2000). This scale also gives opportunity to compare prevalence rates and examine risk groups of PTSD among different populations (Foa et al., 1997). The 49-item scale that can be administered to adults, and completed in 15 minutes.

The PDS is composed of four sections, each evaluates different dimension of experiencing traumatic events. In the first part, via a traumatic event checklist (natural disaster, accident, sexual-physical assault, etc.), participants are asked to report all the stressful or traumatic event(s) experienced, witnessed, or confronted in their lifetime. If they have experienced or witnessed more than one event, then they are asked to choose the traumatic event that bothered them most in the second part of the PDS. The participants are asked to complete the rest of the questionnaire according to the identified most bothersome event. The second part also includes questions on the time that elapsed since the event and the severity of the impact-the participant experienced during (at the time of) the event. This is determined by 6

questions inquiring the perceived life threat, injury, and/or feelings of helplessness/terror. In this study, this impact score obtained from 6 items with 'Yes' or 'No' responses, are labeled as 'severity of the event'. The more 'yes' responses indicate the more 'severity' felt during the event. These six items also provide information about DSM-IV-TR Criteria A for PTSD diagnosis. The first 4 questions are inquiring serious injury or threat to integrity to oneself or others. The other 2 questions are about the emotional response given during the event such as helplessness, horror or fear. The reported adverse event can be classified as traumatic, only if the individual responds at least one of these 4 questions and one of these 2 questions as 'Yes' among the six questions on Criteria A. Part 3 examines the frequency of the 17 potential PTSD symptoms currently (in the past month) clustered in three groups of re-experiencing (5 items), avoidance (7 items) and arousal (5 items) symptoms. Participants are asked to rate the occurrence of symptoms from 0 = 'not at all or only once' to 3 = 'five or more times a week/ almost always'. This part provides a total 'posttraumatic symptom (PTS) severity' score ranging from 0–51, higher scores indicating more severe symptoms. In this study, a total mean score was obtained by summing up the responses of posttraumatic stress symptoms and dividing them by the number of items (M = 0.90, SD = 0.75, Min= 0, Max= 2.94, Range = 2.94). The 3 clusters are in parallel with PTSD symptom categories of Criteria B (reexperiencing), Criteria C (avoidance), Criteria D (hyperarousal) in DSM-IV (APA, 1994). In this study, PTS severity score is labeled as 'symptom severity' and used as a dependent variable in data analysis and model testing. This third part also includes questions about Acute, Chronic, Delay onset of PTSD and Criteria E (duration of symptoms) in DSM-IV. Part 4 assesses the areas of daily functioning (i.e., work, school, friend relations, housework, etc.) that may be effected by the traumatic event and successive symptoms. There are 9 items, each is rated as 'Yes' or 'No'; the more 'Yes' responses indicate more impairment in functioning. The results provide information about Criteria F (level of impairment) in DSM-IV.

Among the psychometric properties of the scale, the internal consistency of 17 items of PTS severity have been reported as .92, and test-retest reliability coefficient as .83 indicating high degree of reliability.

The PDS was translated and adapted into Turkish by Isikli (2006) and the psychometric properties have been reported as satisfactory (Isikli, 2006). The internal consistency of 17 items of PTS severity have been obtained as .93, and item-total correlation coefficient ranged from .39 to .82. The responses to the 17 items of PDS were subjected to factor analysis using Principal Axis Factoring and Varimax rotation. Three factors solution was obtained and explained 59% of the variance.

In a study conducted among a representative community sample (N = 1253) from 3 provinces of Turkey, namely Ankara, Erzincan, Kocaeli (Karanci et al., 2009), a Cronbach's alpha of .90 was calculated for these 17 items on PTS severity score. Three-factor solution explained 52% of the variance and the internal consistency coefficients were for reexperiencing .82, for avoidance .77, and for arousal .78.

In the present study, PDS was used to examine lifetime experiences of various traumatic events, the most distressing event and type of the event, to diagnose probable PTSD and obtain posttraumatic symptoms, their severity and impact on levels of functioning. Three- factors, in this sample explained 55.8% of the variance and in terms of internal consistency of 17 items indicating posttraumatic stress symptoms severity Cronbach's alpha was found to be .91. Internal consistency coefficients were for reexperiencing .82, avoidance .79, and arousal .86 (See Appendix B for the PDS).

2.2.3 The Event-Related Rumination Inventory (ERRI)

The Event-Related Rumination Inventory (ERRI) is a 20-item scale designed to assess posttraumatic cognitive processing. Two styles of rumination related to a particular trauma; intrusive rumination and delibarate rumination are tapped. The ERRI, developed by Cann et al. (2011), is an adaptation from Calhoun et al.'s (2000) cognitive processing measure. The ERRI consists of two subscales; in the first part, participants are asked to rate the degree of finding themselves *involuntarily* thinking about the event during the weeks immediately after the traumatic event, on a 4-point scale (0 = not at all, 3 = often). This intrusive rumination part includes items like 'I could not keep images or thoughts about the event from entering my mind', or 'I find myself automatically thinking about what had happened'. The second part requires

individuals to rate the time they spent *intentionally* thinking about the traumatic event during the weeks soon after the event. This delibate rumination part includes items like ‘ I thought about whether I could find meaning from my experience’ or ‘I forced myself to deal with my feelings about the event’. The internal consistencies (intrusive α = .94 and deliberate α = .88) were found to be strong (Cann et al., 2011) and two factors accounted for 57% of variance. In a recent study (Bosson et al., 2012) only delibarate rumination subscale was used and revealed a Cronbach alpha of .93 in that sample.

The inventory was translated and adapted into Turkish by Calisir and her colleagues (in progress). Two-factor solution was obtained as a result of eigenvalues above 1. The first factor was labeled as ‘Intrusive’ and composed of 10 items and explained 47% of the variance. The second factor was labeled as ‘Deliberate’, composed of 10 items and explained 11% of the variance. The factor structure of items were in agreement with the original scale. This two-factor solution explained 58% of the total variance, and the tests of sphericity reported as .95. The results indicated that ERRI had a good construct validity in Turkish sample.

In this study, ERRI was used to distinguish the types of event-related rumination people use in the aftermath of trauma, and examine possible effects, of using that type of rumination, on the posttraumatic outcomes. Two factors resulted in high internal consistencies ‘Intrusive’ rumination as .93 and ‘Deliberate’ rumination as .87 (See Appendix C for the ERRI).

2.2.4 The Posttraumatic Growth Inventory (PTGI)

The Posttraumatic Growth Inventory (PTGI) is a 21-item scale, developed by Tedeschi and Calhoun (1996) to assess the perceived positive changes occurring in the aftermath of traumatic life events. It is claimed that, following traumatic events people may change spiritually, find new possibilities in their lives, feel stronger as a person, have a greater appreciation for life, and improve their relations to others. The scale has five subscales assessing these domains; new possibilities (5 items), relating to others (7 items), personal strength (4 items), spiritual change (2 items) and appreciation of life (3 items). Participants rate each item, according to the extent of change that has taken place in their life after a traumatic event, ranging from 0 = ‘I did not experience this change, to 5 = ‘I experienced this change to a very great

degree'. PTGI scoring consists of a total growth score and growth in five psychological growth dimensions. The five-factor solution explained 60% of the variance (Cohen et al., 1998). The Cronbach's alpha coefficients of each factor were reported as satisfactory; new possibilities (α = .84), personal strength (α = .72), relating to others (α = .85), spiritual change (α = .85), appreciation of life (α = .67). The PTGI was examined among university students (Calhoun et al., 2000) and found to have acceptable construct validity; internal consistency (α = .90) and test-retest reliability as .71 over a two-month interval.

PTGI was translated to Turkish by Kılıç (2005). In this translation, instead of a 6-point rating scale, Kılıç prefered to use 5-point scale. Later Dirik (2006) translated the scale and applied some modifications to Kılıç's format. The rating scale stayed the same as in the original scale (6-point). In Dirik's study, among a sample of rheumatoid arthritis patients, 3-factor structure was obtained, namely change in interpersonal relations (α = .86), change in philosophy of life (α = .87), and personal strength (α = .88). The scale as a whole, revealed a very high internal consistency (α = .94).

As a result of Karanci and colleagues' study (2009), five factor model of PTG as in the original scale structure, was obtained. The Cronbach alpha for the whole scale (21 items) was found to be .93. The internal consistencies of these five factors were for new possibilities, relating to others, appreciation of life, greater sense of personal strength, spiritual change .80, .83, .81, .72, .65 respectively.

The Turkish translated version (Dirik & Karanci, 2008) of the PTGI was used in a study (Karanci et al., 2012) to test five-factor model of PTG. The reliability coefficients for the sample were for new possibilities (α = .81), relating to others (α = .84), appreciation of life (α = .83), personal strength (α = .79), spiritual change (α = .63).

This scale is used in order to examine positive transformations in the aftermath of traumatic events and to assess possible contributing factors related with positive outcomes. A mean score was calculated for the total score of posttraumatic growth (*M* = 2.81, *SD*= 1.23, Min= 0, Max= 5, Range = 5) by summing up responses of the items of PTGI and dividing into the item number. The higher the mean scores, the higher the growth in the aftermath of trauma. In this study, Dirik's (2006)

translation was used and five-factor solution (Karanci et al., 2009) yielded internal reliability as measured by Cronbach's alpha is for 'New possibilities' subscale .80, for 'Relating to others' subscale .77, for 'Appreciation of life subscale .81, for 'Personal strength' .72, for 'Spiritual change' .76 and twenty one items of the scale as a whole .91 (See Appendix D for the PTGI).

2.2.5 The Basic Personality Traits Inventory (BPTI)

The Basic Personality Traits Inventory (BPTI) is a 45-item scale, developed to define and assess personality traits among Turkish culture (Gençöz & Öncül, 2012). Participants are asked to rate the adjectives reflecting their own personality traits on a 5-point scale. The inventory was administered to a sample of 510 university students in order to evaluate the factor structure and psychometric properties. The inventory consists of 6 subscales of extraversion (α = .89), conscientiousness (α = .85), agreeableness (α = .85), neuroticism (α = .83), openness to experience (α = .80), and negative valence (α = .71). The reliability (Cronbach's alpha) coefficients for each subscale were found to be adequate. The five personality factors were in agreement with the literature but a sixth factor was added which indicated negative valence. This factor has items like 'being rude', 'insincere', 'having no manners'. Item-test correlation coefficients varied from 0.32 to 0.77. The correlations of the personality dimensions examined with self-esteem, coping strategies and social support, STAI-S and STAI-T and PANAS confirmed the validity of the scale.

BPTI was used in a study of Turkish community sample (Karanci et al, 2009). Exploratory factor analysis, with varimax rotation yielded six factors, accounting for 44.96% of the total variance. The factors were agreeableness (15.96%), conscientiousness (9.68%), extraversion (6.66%), neuroticism (4.76%), negative valence (4.53%) and openness to experience (3.37%). Cronbach's alpha internal consistency coefficients of agreeableness, conscientiousness extraversion, neuroticism, negative valence, and openness to experience were .83, .78, .78, .76, .59 and .67 respectively for that sample. The negative valence dimension was excluded from the analysis.

In this study, the BPTI was used to evaluate the effects of personality on posttraumatic processes and posttraumatic outcomes. The coding was changed for

the eight items (6, 7, 21, 22, 24, 32, 38, 39) that were reversely coded. Six-factor solution (Karanci et al., 2009) revealed internal reliability for this study, as measured by Cronbach's alpha is for agreeableness .81, for conscientiousness .77, extraversion .79, neuroticism .79, negative valence .69 and openness to experience .61. The Cronbach's alpha reliability of the whole scale was .76 (See Appendix E for the BPTI).

2.2.6 Ways of Coping Inventory - Turkish form (WCI-T)

The Ways of Coping Inventory (WCI) is a 66-item checklist initially developed (1980) and later revised by Folkman and Lazarus (1985) in order to assess cognitive and behavioral coping processes the individuals use in the aftermath of stressful life events. WCI ratings are on a 4-point scale (0) indicating 'not used', (3) indicating 'used a great deal'. Folkman and Lazarus (1985) proposed 8 forms of coping (confrontive coping, planful coping, distancing, self controling, seeking social support, accepting responsibility, escape/ avoidance, positive reappraisal). In a study among undergraduate students (Folkman & Lazarus, 1985) alpha coefficients of eight scales ranged between .59 to .88.

Siva (1991) translated and adapted the scale into Turkish with the inclusion of 8 new items related to fatalism and superstitious beliefs. Some of the fatalistic coping items are *"I prayed to God for help", "I thought what happened was my fate and it doesn't change".* The internal consistency for the whole scale was .91, and the seven-factor structure was named as planned behavior, fatalism, mood regulation, being reserved, acceptance, maturation, and helplessness-seeking help. In 1999 Karanci, Alkan, Akşit, Sucuoğlu, Balta used this scale with some modifications in a sample of earthquake survivors in Turkey. In that version, 74 items were reduced to 61 by two experienced judges in the field of community disasters. In addition to this, the response rating scale was changed from 4-point scale to 3–point scale, 1 indicating 'never', 2 indicating 'sometimes' and, 3 'always'. In the pilot study, another item was excluded from the study, leading to 60 items. After the analysis of the factor structure, 11 items were also excluded from the analysis and the scale remained with 49 items. The Cronbach's alpha reliability for the whole scale was .76. The factor analysis revealed a 5-factor solution, namely Problem-solving/optimistic (α= .75), Fatalistic Approach (α= .78), Helplessness Approach

(α= .69), Social Support (α= .59), Escape (α= .51). Later, the Turkish form was used among different populations and yielded different factor-structures (Kesimci, 2003; Karanci & Erkam, 2007). Recently, the follow-up study (Karanci et al., 2011) conducted among community sample, revealed a 5-factor solution, namely fatalistic, problem solving/optimistic, helplessness/self-blame, active/social support, avoidance with the reliability coefficients as .88, .84, .76, .69, .56, respectively. Thirty-eight items accounted for by 45.88% of the total variance.

In this study, 42-item version of WCI-T is used in order to assess the relation of coping strategies with the severity of PTS symptoms and/or PTG. The participants are asked to rate on 3-point Likert type scales (1= never, 2= sometimes, 3= always). The five-factor structure of the previous study (Karanci et al., 2011) among community sample (N = 118) was examined. The Cronbach's alpha were for fatalistic coping .87, problem solving/optimistic coping .78, helplessness/self-blame coping .68, active/social support coping .51, avoidance coping .33. Since the Cronbach's alpha were low for social support and avoidance coping and the sample size compared to this study was smaller, the factor structure of T-WCI on this sample is analyzed by forcing the factors to four (Dirik, 2006) using principal components with varimax rotation. The factor analysis yielded four factors (see Table 2) almost all items highly loaded only on one factor, with the exception of item 32 (*'I gave up fighting'*), which was negatively loaded to problem-focused coping factor. Therefore, item32 was placed on the next highly loaded factor of helplessness coping. The solution revealed four factors namely "fatalistic coping" including 11 items (α = .86), "seeking support coping" including 8 items (α = .72), third factor as "problem solving coping" including 12 items (α = .77), and fourth factor as "helplessness coping" including 6 items (α = .75).

This 4-factor explained 36.75% of variance, and the overall alpha reliability of the scale was .86 (See Appendix F for the T-WCI).

Table 2 Factor Loadings with Varimax rotation of Turkish form of Ways of Coping Inventory

	Factors			
	1	2	3	4
Fatalistic coping				
Item37	**.79**	-.07	.23	.09
Item34	**.72**	-.12	.27	.08
Item15	**.71**	.16	.15	-.06
Item24	**.69**	-.20	.21	.06
Item14	**.69**	.19	.08	.05
Item10	**.68**	-.04	.20	.11
Item20	**.65**	-.05	.15	.16
Item30	**.59**	.16	.14	-.02
Item16	**.55**	.03	-.01	.31
Item29	**.34**	.14	.02	.09
Item9	**.31**	.12	.10	.25
Problem focused coping				
Item19	.09	**.59**	-.06	.23
Item22	.06	**.56**	-.24	.23
Item25	-.03	**.55**	.03	.24
Item18	.07	**.54**	.13	-.06
Item27	-.03	**.50**	.15	.34
Item39	.02	**.48**	-.01	.35
Item23	.20	**.46**	-.02	.29
Item8	.10	**.46**	-.12	.34
Item21	.04	**.44**	.29	-.01
Item41	-.05	**.44**	-.10	-.05
Item31	.02	**.42**	-.01	.35
Item42	.08	**.37**	-.08	.34
Helplessness Coping				
Item12	.12	-.04	**.61**	-.08
Item35	.20	-.19	**.60**	.11
Item36	.24	-.05	**.58**	.03
Item26	.05	-.02	**.57**	.06
Item17	.16	.01	**.54**	-.21
Item40	.06	-.05	**.48**	.08
Item33	.02	-.04	**.48**	.07
Item13	.19	.24	**.47**	-.03
Item2	.26	.02	**.47**	.15
Item4	.18	.30	**.46**	-.09
Item32	.13	-.38	**.27**	-.08

Table 3 (Continued)

Seeking Support Coping				
Item6	.12	.09	-.02	**.71**
Item5	.08	.05	-.02	**.61**
Item7	.08	.18	-.05	**.57**
Item38	.19	.28	.07	**.49**
Item28	.05	.38	.05	**.45**
Item1	-.01	.00	.29	**.44**
Item3	.25	.22	.03	**.42**
Item11	.11	.33	.07	**.39**
Cronbach Alpha	.86	.77	.75	.72
Explained Variance (%)	16.58	11.57	5.03	3.58
Total Explained Variance (%)		36.75		

2.2.7 Multidimensional Scale of Perceived Social Support (MSPSS)

The Multidimensional Scale of Perceived Social Support (MSPSS) is a 12-item scale developed by Zimet, Dahlen, Zimet, & Forley (1988) in order to assess the individual's perception of social support taken from 3 main sources, namely family, friends, and significant others. The scale is a 7-point Likert type scale, ranging from 1 ('disagree very strongly') to 7 ('agree very strongly'). The higher scores on the subscales of MSPSS, indicate greater levels of perceived social support. The psychometric characteristics of the MSPSS was assessed in a sample of 275 university students. The scale was composed of 3 subscales with 4 items per each; social support from family (items 1, 2, 7, 10) friends (items 3, 4, 8, 12) and significant others (items 5, 6, 9, 11). The internal consistency of the original scale was reported as good (α = .88), reliability coefficient for subscales of significant other (α= .91), family (α = .87), and friend (α = .85) and test-retest reliabilities over 2 to 3 months period were 0.72, 0.85, and 0.75 respectively (Zimet et al., 1988).

Turkish adaptation of the scale was first conducted by Eker & Akar (1995), then by Eker, Akar, & Yaldız (2000). The scale was conducted on different populations such as university students, psychiatric inpatients-outpatients, kidney disease patients, and Cronbach's alpha were found between .85 to .91 (Eker, Akar, & Yaldız, 2000). In a study with Rheumatoid Arthritis patients, the overall Cronbach alpha reliability of the scale was found to be .89 (Dirik, 2006). Recently, in the

follow-up study among a Turkish representative community sample, reliability coefficients were found as .87 for friend scale, .82 for family scale and .92 for significant other scale (Karanci, et al., 2011).

In this study, this MSPSS was used to assess participants' perceptions of social support received in the aftermath of a traumatic event and examine whether perceived social support has effects on the posttraumatic outcomes such as PTS severity and/or PTG. In the present study, a total mean perceived social support score was obtained by summing up the responses to the items of MSPSS and dividing them by the number of items (*M* = 5.46, *SD*= 1.42, Min= 1, Max= 7, Range = 6). In this sample, Cronbach's alpha reliability coefficients were for perceived social support from friend .90, from family .90, and from significant other .89. The overall reliability of the scale (12 items) found as .90 (See Appendix G for the MSPSS).

2.3 Procedure

In order to examine the rates and types of traumatic events encountered in lifetime, evaluate the impact and possible outcomes of experiencing such events, data was gathered by a community sample, İzmir. A large scale project was conducted aiming at searching for prevelance rates of probable PTSD and PTG levels in 2009 (Karancı et al., 2012) among 3 provinces of Turkey (Ankara, Kocaeli, Erzincan). However, İzmir is located in the western extremity of Anatolia, located on the Central Aegean coast of Turkey and considered to be the third largest city in Turkey (with a population of 4,005,459) (Turkish Statistical Institute, 2012). Although the city is placed on the seismic zone and has been devastated by several earthquakes, a lot of people from all over Turkey immigrated into İzmir. The climatic conditions and location may have a role in preferring the city. The population of the city is predominantly Muslim, however secularism is also very strong in this region of Turkey and İzmir is known as to be home to Turkey's second largest (after Istanbul) Jewish community.

According to the results of address based population registration system (TurkStat, 2012) İzmir (both district centers and towns-villages included) has a total population of 4,005,459 (3,661,930 when towns-villages excluded) and 49.91% of total population is men, 50.01% women. The median age for men is 33.4, and for women 34.8. In terms of urbanization rate, literacy rate, gross domestic product per

capita and ratio of workers in branch of industry compared to total employment rates, İzmir is reported as above Turkey average. In 2012, the rate of illiterate (above the age of 15) in Turkey was 5.1%, whereas it is reported as 2.4% in İzmir.

The sample size was computed by TurkStat, based on a trauma prevalence expectation of 60% and error rate of 5%. As a result of this calculation, 740 participant house addresses were provided by TurkStat. A stratified cluster community sampling method was used, in which random sampling of the households were drawn from the address based census information.

The city of Izmir is composed of 30 districts, from Aliağa to Selçuk of which recently added with the new municipal arrangements. The constitution of the "Greater İzmir Metropolitan Municipality", was initially nine, and then eleven metropolitan districts, namely Balçova, Bayraklı, Bornova, Buca, Çiğli, Gaziemir, Güzelbahçe, Karabağlar, Karşıyaka, Konak and Narlıdere. Almost all of these are former district centers or neighborhoods which stood on their own, with their own distinct features. Among these, Karabağlar, Buca, Bornova, Konak, Karşıyaka and Bayraklı are the most densely populated settlements (TurkStat, 2012), where representativeness may be considered to be high. In this study, the former eleven metropolitan districts of "Izmir Metropolitan Municipality" were taken into consideration.

The sample that consisted of adults, age 18 and above, residing in İzmir was provided by Turkish Statistical Institute (TurkStat), through stratified cluster sampling method from address based population registration system. Before gathering the sample, the representative sample size was computed by TurkStat. According to the computation, the sample consisted of 740 house-based addresses from 11 districts shown in the Table 3. For each main address, 2 additional alternative addresses were provided by TurkStat.

Initially, application was submitted to *The Applied Ethics Research Center of Middle East Technical University* (METU) and was granted. Besides, application to *The Scientific and Technological Research Council of Turkey* (TUBITAK) for short-term funding research and development program, resulted in success and TUBITAK submitted its written consent for 1 year support while conducting this thesis study.

Table 3 The distribution of sample among 11 districts of İzmir

	District	Sample
1.	Balçova	20
2.	Bayraklı	80
3.	Bornova	110
4.	Buca	100
5.	Çiğli	50
6.	Gaziemir	30
7.	Güzelbahçe	10
8.	Karabağlar	120
9.	Karşıyaka	90
10.	Konak	110
11.	Narlıdere	20
	Total	740

After obtaining approval from the Ethics Committee of METU, the Governorate of İzmir and Provincial Directorate of Public Health were informed about the aim and scope of the study and approval for the implementation was requested. Approval (via written consent) was granted for conducting this research on site.

The research booklet (a socio-demographic information form, Post Traumatic Stress Diagnostic Scale, Ways of Coping Inventory–Turkish form, Basic Personality Traits Inventory, Posttraumatic Growth Inventory, Multidimensional Social Support Scale, Event-Related Rumination Inventory), together with informed consent and debriefing forms were printed. In order to explain respondents the rating scales of the instruments, cards were prepared and printed with graded tones of colors.

Twelve interviewers, who worked in shifts, were selected among psychology (10) and sociology (3) departments of Ege University, İzmir University of Economy, Abant İzzet Baysal University. They were trained in advance about issues such as Traumatic Life Events, Posttraumatic Stress Disorder, Post Traumatic Growth, the aims of this study, data collection procedure, Kish Method, informed consent and voluntariness, administration of the instruments, debriefing forms and psychiatric referral if needed.

In the present study, data collection was completed between June, July 2013, and conducted through home visits starting from the main address provided by

TurkStat, followed by primary and secondary alternates. Before starting data collection, the sample was grouped according to the distances of the addresses and proximity of the districts.

Only one subject among each household was chosen by using the Kish method (Kish, 1965). According to this method (see Appendix H), interviewers, when they visited a household, first asked the number of people above the age of 18 living permanently in the household. This number of adults and the last digit of the research booklet number were matched in the Kish table to provide the number of the member who will take part in the research. Since only one adult was included from each household, this method provided a random selection of one participant from each household. People who were not staying at the address for more than six months (because of military obligation, studying or working in another city, staying in prison, in hospital, etc.) and people under the age 18 were excluded from the study. If the person chosen was not at home during the visit, the household was revisited through an appointment to contact the delineated household member. The procedure ended if the participant could not be reached in three consecutive visits. The interviewers went to the alternate addresses if the household from the main addresses could not be reached. Moreover, since the participation was based on voluntariness, if the individual rejected to participate, then the researcher likewise moved to the alternative addresses.

All the participants were informed about the purpose and scope of the study and written consent forms (see Appendix I) were signed prior to each participation. The instruments were filled out individually, on one occasion. The interviewer gave the necessary instructions for each scale and then read the items and recorded the responses. The administration started with the sociodemographic information form, followed by PDS in which a potentially traumatic event may be reported. The whole research booklet was completed according to the most distressing potentially traumatic event. However, if the individual did not disclose or report any potentially traumatic event, then the instruments such as BPTI, T-WCI, MSPSS were completed considering adverse or stressful events in general.

Participants were informed and assured both verbally and in written form about the voluntariness and possibility to withdraw at any time due to overwhelming

emotions or cognitions related to the reported traumatic event. However, if the participant's distress continued, a mental health facility (Ege University Hospital Adult Psychiatry Clinic) was offered for further professional support. The administration took around 45 minutes for participants to complete all questionnaires. All participants completed the measures anonymously and they were informed about the confidentiality at all stages of data collection, data analysis, and dissemination of results.

At the end of the administration, debriefing forms (see Appendix J) that included further details, such as expected time, expected results of the study, contact information, were provided to each participant.

2.4 Statistical Analyses

Statistical analyses were conducted with Statistical Package of Social Sciences (SPSS) 17 Program and LISREL 8.80. Prior to analyses, accuracy of data entry, missing values, outliers were examined. Factor analysis was carried out for WCI-T with Principal Component Analysis and Varimax rotation. Internal consistency of the whole scale and subscales were assessed by Cronbach's alpha values. The mean scores of the main variables were utilized throughout the analyses and presented in descriptive analysis.

Correlational analyses were conducted for all variables of the study to examine the associations among them.

In order to evaluate the effects of event-types and gender differences, responses of participants were compared with respect to experiencing most frequent and distressing potentially traumatic events, events qualifying as traumatic (i.e., Criteria A of PTSD met), and events meeting the specification of probable PTSD. Chi square analyses were conducted to compare different event types and gender differences. Next, 242 participants who indicated that they had not experienced any potentially traumatic event during lifetime were removed from the analyses. Logistic regression analysis was used to evaluate the role of sociodemographic variables including age, gender, income, education level and previous psychiatric problem, total number of events, on probable PTSD.

Next, 13 types of events were categorized into four groups namely; (1) intentional/assaultive violence, (2) injury/shocking event, (3) unexpected/sudden

death, (4) other events. Multivariate analysis of variance (MANOVA) was performed to compare these four group of traumatic events with respect to participants' responses on three posttraumatic stress symptoms, i.e., reexperiencing, avoidance, arousal. MANOVA was also conducted to compare four group of traumatic events with respect to participants' responses on posttraumatic growth domains, i.e., new possibilities, spiritual change, relating to others, personal strength, and appreciation of life.

Moreover, two separate hierarchical multiple regression analyses were performed to determine the predictors of posttraumatic symptom severity and posttraumatic growth. Four steps were carried out in order to see the effects of sociodemographic factors, personality traits, event-related factors, post-trauma variables on outcome variables.

Finally, structural equation modeling (SEM) was conducted by LISREL to test the comprehensive model suggested by the present study, in which differential pathways lead to different patterns of outcome as either posttraumatic stress symptom severity or posttraumatic growth. Additionally, in order to see the relationship between two outcome variables, i.e., symptom severity and posttraumatic growth, a simpler model was tested via LISREL.

CHAPTER 3

RESULTS

The results of this study are grouped in three sections. The first section presents the results of data cleaning, descriptive statistics and correlations among the study variables. In the second part, the group comparison and regression analyses results are outlined with respect to types of events, probable posttraumatic stress disorder (PTSD), sociodemographic factors, personality traits, event-related variables, posttrauma variables on diverse outcomes of traumatic events. The third section gives the findings based on testing the proposed model of posttraumatic stress symptom severity and posttraumatic growth.

3.1 Data Cleaning, Descriptive Statistics, Bivariate Correlations

3.1.1 Data Cleaning

Prior to the analysis, the data were examined for accuracy of data entry, missing values, fit between their distributions, and the assumptions of multivariate analysis. To improve pairwise linearity and to reduce the extreme skewness and kurtosis, five variables namely agreeableness, conscientiousness, negative valence, perceived support from family and perceived support from significant other, were transformed using reciprocal transformation. Since negative valence subscale was severe positively skewed, the scale was inversed, while since the other subscales were severe negatively skewed, they were reflected. Totally, 740 cases were examined in the analyses.

In this study, in order to follow up some of the variables more accurately labels were given. The events that were presented to the participants (listed in the first part of Posttraumatic Diagnostic Scale-PDS) were labelled as potentially traumatic events (PTEs). The list was composed of thirteen events one of which is labelled as ‘other events’. The events on this item were not provided to the individuals, rather they were based on the participants’ statements of experiencing a potentially traumatic event type other than the listed 12 types of events. The reported

events included stressful events mostly life transition problems such as divorce, economic crises, family-marriage-school relationship difficulties, work-financial problems and other health-related problems (e.g., MS, epilepsy, down syndrome). If any PTE was reported as distressing or bothering by the participant and classified traumatic according to DSM-IV-TR Criteria A of PTSD diagosis, which was based on participants' own responses to questions of 17 to 22 in the Posttraumatic Diagnostic Scale (see Appendix B for these items on PDS), then this event is called a 'Traumatic Event' (TE). The severity experienced during the traumatic event was one of the variables used throughout the analyses, which included two relatively objective severity questions (e.g., Were you physically injured?; PDS items 17 & 18), and four subjective severity questions (e.g., Did you think that your life was in danger?, Did you feel terrified?; PDS items 19 to 22). Throughout the analyses, both of these severity indicators were classified as 'event severity' in order to examine this peritrauma factor's impact on posttrauma processing and the diverse outcomes. Finally, the posttraumatic stress symptoms (see Appendix B for PDS items 23 to 39) were summed up for a total score of posttraumatic stress symptoms severity (PTS symptom severity) and shortly labelled as'symptom severity'. This total score is obtained by summing the participant responses to 17 items that correspond to three main symptoms (reexperiencing, avoidance, arousal) of probable PTSD.

3.1.2 Descriptive Statistics

Descriptive statistics (e.g., mean and standard deviations) of main variables examined in the study are presented in Table 4.

Table 4 Descriptive Information for the main measures of the study

Measures	Mean	*SD*	Min.	Max.
Personality Traits				
Extraversion	3.91	0.81	1	5
Agreeableness	4.63	0.46	2	5
Conscientiousness	4.29	0.65	1	5
Neuroticism	2.82	0.88	1	5
Openness to experience	4.00	0.68	1	5
Negative Valence	0.98	0.36	1	4
Event-Related Variables				
Total number of PTEs	2.05	1.23	1	8
Event severity (based on reported TE)	2.30	1.53	0	3
Elapsed time since the TE	5.02	1.34	1	6
Duration of symptoms*	1.74	0.44	1	2
Impairment of Functioning	2.44	2.71	0	9
Perceived Social Support				
Friend	4.91	1.96	1	7
Family	5.78	1.71	1	7
Significant Other	5.69	1.79	1	7
Total perceived support	5.46	1.42	1	7
Event-Related Rumination				
Intrusive Rumination	1.70	0.94	0	3
Deliberate Rumination	1.47	0.84	0	3
Ways of Coping				
Fatalistic coping	2.37	0.49	1	3
Seeking support coping	2.62	0.35	1	3
Problem solving coping	2.61	0.32	1	3
Helplessness coping	1.91	0.41	1	3
PTSD Symptoms				
Reexperiencing	1.02	0.88	0	3
Avoidance	0.75	0.74	0	3
Arousal	0.99	0.98	0	3
PTS symptom severity	0.90	0.75	0	3
PTG				
New Possibilities	2.45	1.52	0	5
Spiritual Change	3.03	1.60	0	5
Relating to others	2.33	1.50	0	5
Personal Strength	3.40	1.42	0	5
Appreciation of Life	3.12	1.72	0	5
Total PTG	2.81	1.23	0	5

*****Duration of symptoms: 1= less than 3 months, 2= more than 3 months

3.1.3 Bivariate Correlations among the Variables

Bivariate Correlations among the variables of interest in this study are presented in Table 5.

As can be seen from Table 5, among the major outcome variables PTS symptom severity was positively correlated with total number of events experienced (r =.20, p< .01), duration of symtoms (r =.38, p< .01), event-severity (r =.33, p< .01), impairment of functioning (r =.65, p< .01), intrusive rumination (r =.55, p< .01), deliberate rumination (r =.47, p< .01), neuroticism (r =.38, p< .01), agreeableness (r =.09, p< .05), fatalistic coping (r =.26, p< .01), helplessness coping (r =.46, p< .01), and total score of PTG (r =.13, p< .01), while negatively correlated with time passed since the event (r = -.24, p< .01), extraversion (r = -.24, p< .01), and total peceived social support (r = -.17, p< .01).

The outcome varible total PTG was positively correlated with the other outcome variable PTS symptom severity (r = .13, p< .01), with duration of symptoms (r =.13, p< .01), extraversion (r =.09, p< .01), agreeableness (r =.28, p< .01), conscientiousness (r =.31, p< .01), openness to experience (r =.28, p< .01), total perceived support (r =.30, p< .01), intrusive rumination (r =.14, p< .001), deliberate rumination (r =.35, p< .01), fatalistic coping (r =.22, p< .01), seeking support coping (r =.36, p< .01), problem solving coping (r =.41, p< .01), helplessness coping (r =.17, p< .01).

With respect to the variables associated with rumination; intrusive rumination was correlated positively with total number of events potentially traumatic events experienced (r =.12, p< .01), reported event severity (r =.16, p< .01), duration of symptoms (r =.20, p< .01), impairment of functioning (r =.41, p< .01), deliberate rumination (r =.56, p< .01), neuroticism (r = .26, p< .01), negative valence (r =.09, p< .05), fatalistic coping (r =.12, p< .01), helplessness coping (r = .36, p< .01), whereas it had negative correlations with time elapsed since event (r =.14, p< .01), extraversion (r = -.19, p< .01), openness to experience (r = -.10, p< .05). On the other hand, deliberate rumination was correlated positively with total number of events (r = .15, p< .01), reported event severity (r = .23, p< .01), duration of symptoms (r = .20, p< .01), impairment of functioning (r = .38, p< .01), agreeableness (r = .13, p< .01), neuroticism (r = .21, p< .01), fatalistic coping (r =

.09, $p < .05$), seeking support coping ($r = .14$, $p < .01$), problem solving coping ($r = .17$, $p < .01$), and helplessness coping ($r = .28$, $p < .01$).

In regards to variables associated with perceived social support and coping styles, total perceived social support (from friend, family and significant other) was positively correlated with problem solving coping ($r = .19$, $p < .01$), and as expected with seeking support coping ($r = .34$, $p < .01$).

Table 5 Pearson Correlations of Posttraumatic Stress Symptom Severity, PTG and study variables

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Age																
2	Sex	.100**															
3	Marital status	-.173**	.011														
4	Education (years)	-.184**	.197**	.185**													
5	Employment	.152**	-.407**	-.006	-.248**												
6	Prior psychiatric pr.	.082*	-.107**	.003	-.069	.083*											
7	Income	-.151**	.080*	.095*	.345**	-.208**	-.131**										
8	Total no. of events	.084	.150**	-.036	.034	-.093*	.133**	-.073									
9	Time since Event	.136**	.045	-.092*	-.014	.028	.042	-.002	.058								
10	Event-severity	-.023	-.070	-.015	-.027	-.016	.158**	-.080	.153**	.004							
11	Duration of Symp.	.074	-.123**	.011	-.162**	.132**	.134**	-.143**	.105*	.127**	.115*						
12	Imp. of Functioning	-.050	-.083	.059	-.081	.040	.258**	-.185**	.107*	-.211**	.235**	.236**					
13	Reexperiencing	-.029	-.248**	.032	-.198**	.099*	.214**	-.242**	.163**	-.259**	.288**	.326**	.520**				
14	Avoidance	-.085	-.191**	.058	-.180**	.089*	.218**	-.224**	.192**	-.193**	.266**	.329**	.584**	.649**			
15	Arousal	-.080	-.159**	.042	-.185**	.112*	.281**	-.257**	.163**	-.185**	.315**	.348**	.600**	.668**	.659**		
16	PTS sym. severity	-.076	-.225**	.051	-.213**	.114*	.271**	-.274**	.197**	-.239**	.329**	.381**	.649**	.866**	.885**	.884**	
17	Intrusive Rum.	-.037	-.215**	.042	-.145**	.163**	.162**	-.224**	.123**	-.135**	.158**	.201**	.406**	.530**	.472**	.441**	.545**
18	Deliberate Rum.	.000	-.105*	.061	-.065	.055	.247**	-.128**	.154**	-.088	.225**	.197**	.382**	.454**	.401**	.388**	.469**
19	New Possibilities	-.061	-.066	-.014	-.039	-.073	.048	-.033	.027	.045	.085	.092*	.036	.118**	.149**	.054	.122**
20	Spiritual Change	-.038	-.096*	-.056	-.220**	.012	.055	-.079	-.060	.032	.063	.123**	.055	.162**	.175**	.126**	.176**
21	Relating Others	-.007	-.071	-.033	-.097*	-.030	.003	-.046	-.062	-.064	.089*	.092*	-.003	.080	.076	.077	.088*
22	Personal Strength	-.001	-.138**	.007	-.131**	-.021	.028	-.091*	-.013	.065	.027	.161**	.009	.098*	.136**	.064	.114*
23	App. of Life	-.099*	-.056	-.088*	-.102*	-.008	-.062	-.034	-.044	.049	.064	.039	-.120**	-.013	.000	-.027	-.015
24	Total PTG	-.050	-.105*	-.043	-.143**	-.034	.022	-.069	-.037	.027	.085	.127**	.001	.117**	.139**	.078	.127**
25	Extraversion	.065	.010	-.023	.169**	-.083*	.001	.112**	-.021	.037	-.101*	-.087	-.189**	-.142**	-.255**	-.226**	-.240**
26	Agreeableness	.217**	-.117**	-.106**	-.210**	.057	.039	-.129**	-.054	-.032	.022	.092*	-.004	.112*	.036	.094*	.090*

Table 5 (Continued)

27	Conscientiousness	.302**	-.136**	-.247**	-.189**	.051	.026	-.118**	-.043	.065	.089*	.075	-.041	.082	-.019	.007	.023
28	Neuroticism	-.081*	-.090*	.026	-.089*	.058	.159**	-.070	.092*	-.102*	.209**	.110*	.317**	.302**	.290**	.412**	.381**
29	Open to experience	.160**	.175**	-.065	-.034	-.102**	-.041	-.010	.020	.070	.021	.020	-.013	-.038	-.057	-.049	-.056
30	Negative valence	-.112**	.120**	.075*	.029	-.023	.040	.012	.043	-.130**	-.015	.024	.087	.053	.075	.101*	.088
31	Fatalistic coping	.210**	-.158**	-.166**	-.493**	.196**	.058	-.213**	-.050	-.060	.074	.143**	.094*	.224**	.254**	.203**	.259**
32	Seeking support coping	.211**	-.061	-.133**	-.177**	.019	-.025	-.095**	-.020	.057	-.008	.041	-.039	.034	.036	.010	.030
33	Problem solving coping	.114**	.028	-.108**	-.020	-.059	-.047	-.035	-.023	-.007	.008	-.036	-.124**	-.019	-.055	-.080	-.060
34	Helplessness cop.	-.047	-.166**	-.025	-.288**	.184**	.175**	-.228**	.042	-.176**	.199**	.153**	.317**	.388**	.424**	.400**	.461**
35	Friend Support	-.075*	-.052	.041	.156**	-.001	-.040	.107**	-.147**	-.069	-.088*	-.104*	-.187**	-.099*	-.111*	-.121**	-
36	Family Support	.062	-.074*	-.181**	.030	.045	-.096**	.086*	-.099*	-.066	-.119**	-.064	-.212**	-.097*	-.102*	-.162**	-.137**
37	Other Support	.007	-.072	-.203**	.052	.014	-.085*	.025	-.096*	-.005	-.013	-.066	-.186**	-.105*	-.125**	-.142**	-.142**
38	Total support	-.007	-.083*	-.139**	.105**	.023	-.092*	.094*	-.146**	-.060	-.094*	-.100*	-.248**	-.128**	-.144**	-.180**	-.172**

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

		33	34	35	36	37
34	Helplessness coping	.025				
35	Friend Support	.272**	-.027			
36	Family Support	.246**	-.069	.295**		
37	Other Support	.267**	-.038	.382**	.588**	
38	Total support	.335**	-.056	.737**	.782**	.830**

Table 5 (Continued)

		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
18	Deliberate Rum.	.564**															
19	New Possibilities	.155**	.370**														
20	Spiritual Change	.130**	.301**	.578**													
21	Relating Others	.128**	.229**	.487**	.631**												
22	Personal Strength	.121**	.309**	.637**	.545**	.557**											
23	App. of Life	.005	.139**	.514**	.475**	.469**	.543**										
24	Total PTG	.143**	.346**	.822**	.815**	.805**	.812**	.723**									
25	Extraversion	-.189**	-.075	.111*	.013	.062	.093*	.084	.091*								
26	Agreeableness	.037	.126**	.182**	.267**	.215**	.270**	.210**	.283**	.227**							
27	Conscientiousness	-.001	.076	.239**	.278**	.224**	.282**	.218**	.310**	.191**	.451**						
28	Neuroticism	.255**	.209**	-.004	.021	-.028	-.050	-.025	-.020	-.255**	-.053	-.086*					
29	Opentoexperience	-.103*	.038	.269**	.162**	.165**	.292**	.220**	.275**	.398**	.358**	.361**	-.098**				
30	Negative valence	.093*	.061	.011	-.023	.009	-.020	-.045	-.013	-.173**	-.281**	-.295**	.219**	-.125**			
31	Fatalistic coping	.117**	.092*	.043	.331**	.212**	.182**	.111*	.218**	-.115**	.280**	.214**	.035	.045	-.018		
32	Seeking support coping	.032	.141**	.291**	.318**	.265**	.324**	.245**	.361**	.073*	.313**	.414**	-.244**	.269**	-.096**	.316**	
33	Problem solving coping	-.066	.171**	.378**	.300**	.298**	.384**	.290**	.414**	.280**	.327**	.343**	-.143**	.404**	-.084*	.174**	.573**
34	Helplessness coping	.362**	.280**	.068	.240**	.203**	.081	.079	.172**	-.313**	.110**	-.013	.320**	-.138**	.080*	.467**	.124**
35	Friend Support	-.041	.021	.134**	.143**	.318**	.212**	.151**	.244**	.121**	.070	-.033	-.127**	.035	.016	-.022	.117**
36	Family Support	-.057	-.034	.095*	.133**	.246**	.132**	.175**	.196**	.118**	.114**	.143**	-.128**	.052	-.045	.102**	.183**
37	Other Support	-.034	-.034	.171**	.196**	.262**	.212**	.217**	.265**	.163**	.139**	.149**	-.069	.105**	-.014	.040	.160**
38	Total support	-.056	-.019	.171**	.201**	.353**	.238**	.230**	.300**	.171**	.136**	.104**	-.139**	.081*	-.017	.047	.194**

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

3.2 Group Comparisons and Regression Analyses

The purpose of this study is both to examine the prevalence rates of traumatic events, and probable PTSD, and to test the possible factors associated with the diverse outcomes such as posttraumatic stress symptoms and posttraumatic growth.

In this section, firstly, a group of analyses conducted in order to explore the characteristics (frequencies, percentages) of different types of events, in which prevalence rates of potentially traumatic events (PTEs), the most distressing PTE, and events qualifying as traumatic events (TEs) were presented separately and then combined. These results will provide answers for relevant research questions of the study. Gender differences will also be included in the examination of prevalence rates of PTEs, most distressing PTE, TE , aiming to test the related hypotheses of the study. In order to evaluate these group differences, Chi-square analyses were conducted.

Next group of analyses, were performed in order to evaluate the prevalence rates of probable PTSD. The possible influence of event types and gender differences on qualifying a probable PTSD were examined. Additionally, a logistic regression was performed in order to estimate the influence of sociodemographic factors, number of similar events and previous psychiatric problem, on the risk for a probable PTSD.

Then, symptom severity, which is the total score of three main symptoms of PTSD (i.e., reexperiencing, avoidance, arousal) was explored. A comparison test was conducted among four groups of different event-types in order to find out whether types of events were related with different symptoms of PTSD. Next, four groups of event-types were compared on five PTG domains (i.e., New Possibilities, Spiritual Change, Relating to Others, Personal Strength, Appreciation of life).

Finally in this section, two separate multiple hierarchial regression analyses were performed for symptom severity and PTG.

3.2.1 Prevalence rates of different Types of Events

In this study, 12 different types of events were presented through the Posttraumatic Stress Diagnostic Scale (PDS) (see Appendix B). If none of the twelve types of events were experienced nor witnessed by the participant, rather another type of event could be reported by the selection of item 13. If the participant reported

a type of event that was not included in the list, then the participant was expected to specify the event. These types of events were mostly related to divorce and relationship problems, unemployment, financial problems, bankruptcy, workplace problems, chronic illnesses, seperation, migration , political issues, academic problems.

The results of these 13 items in total indicating different types of events, were presented in three styles. Firstly, 13 types of events were considered as potentially traumatic event (PTE), where the participant may report more than one event type as experienced or witnessed. Next, 13 event types were classified as the most distressing PTE, in which the participant chose the most bothering/distressing among the reported PTEs. Finally, 13 types of events were analyzed according to meeting the criteria of 'traumatic event' (TE) as specified in PTSD diagnosis of DSM-IV-TR.

3.2.1.1 The Prevalence of Potentially Traumatic Events (PTE)

In order to explore research questions (RQ1), descriptive statistics and chi-square analyses were conducted. According to the descriptive statistics, the mean number of encountering a potentially traumatic event was reported as 2.05 (*SD* = 1.23, Min = 1, Max = 8). Out of 740 participants, 498 (67.3%) reported experiencing at least one PTE throughout their lives. The most frequently experienced PTEs were unexpected-sudden death (*n* = 364, 73.1%), life-threatening illness (*n* = 151, 30.3%) followed by accident-fire-explosion (*n* = 118, 23.7%), and other events (*n* = 101, 20.3%). The frequency and percentages of experiencing at least one PTE and the distribution according to gender are shown in Table 6.

As can be seen from Table 6, the lifetime prevelance of experiencing at least one potentially traumatic event for females (*n* = 325) was 68.3 percent (*N* = 740), while for males (*n* = 173) was 65.5 percent. The prevelance of experiencing at least one PTE were not significantly different in the male and female sample, χ^2 (1, *N* = 740) = 0.46, *p* = .496.

Chi-square test results indicated that females and males were significantly different in experiencing non-sexual assault by a stranger, χ^2 (1, *n* = 498) = 29.69, *p* < .001, Cramer's V = .25, being in a combat or war zone, χ^2 (1, *n* = 498) = 41.50, *p* < .001, Cramer's V = .30, imprisonment, χ^2 (1, *n* = 498) = 12.85, *p* < .001, Cramer's V = .17, torture, χ^2 (1, *n* = 498) = 5.94, *p* < .001, Cramer's V = .12.

Table 6 Frequency and percentage of experiencing at least one PTE

Experienced PTE	*N* = 498 Frequency (%)	*N*=740 (%)	Females *N* =325	Males *N* = 173
1. Accident, fire, or explosion	118 (23.7)	(15.9)	77 (23.7)	41 (23.7)
2. Natural Disaster	72 (14.5)	(9.7)	41 (12.6)	31 (17.9)
3. Non-sexual assault by a family member or acquiantance	60 (12)	(8.1)	38 (11.7)	22 (12.7)
4. Non-sexual assault by a stranger	36 (7.2)	(4.9)	8 (2.5)	28 (16.2)
5. Sexual assault by a family member or acquiantance	9 (1.8)	(1.2)	8 (2.5)	1 (0.6)
6. Sexual assault by a stranger	12 (2.4)	(1.6)	11 (3.4)	1 (0.6)
7. Combat or war zone	40 (8.0)	(5.4)	7 (2.2)	33 (19.1)
8. Sexual contact under age 18 with someone 5 or more years older	11(2.2)	(1.5)	7 (2.2)	4 (2.3)
9. Imprisonment	28 (5.6)	(3.8)	9 (2.8)	19 (11)
10. Torture	21(4.2)	(2.8)	8 (2.5)	13 (7.5)
11. Life-threatening illness	151 (30.3)	(20.4)	102 (31.4)	49 (28.3)
12. Unexpected or sudden death of a loved one	364 (73.1)	(49.2)	245 (75.4)	119 (68.8)
13. Other events	101 (20.3)	(13.6)	63 (19.4)	38 (22.0)

3.2.1.2 The most distressing PTE

In order to explore research question of RQ2, descriptive statistics and chi-square analyses were conducted. The participants who reported at least one PTE (*N* 498), were asked to choose one PTE as most distressing if they reported more than one event. The frequency and percentages of most distressing PTE and the distribution according to gender are shown in Table 7.

As can be seen from Table 7, among 498 participants, 257 of them reported sudden death as the most disturbing potentially traumatic event, followed by other events (*n* = 70) and life-threatening illnesses *(n* = 59). In the whole sample of 476 females 325 (68.3%) and among 264 males 173 (65.5%) of them reported that they have been very bothered by a PTE. A Chi-square test revealed that females and males were not significantly different from each other in terms of reporting most bothering PTE, χ^2 (1, *n* = 740) = 0.46, *p* = .496. The only significant difference found

among females and males was in experiencing sudden death as most distressing PTE, χ^2 (1, n = 498) = 5.79, p < .05, Cramer's V = .11.

Table 7 Frequency and percentage of experiencing the most distressing PTE

Most Distressing PTE	N = 498 Frequency (%)	N=740 (%)	Females N = 325	Males N = 173
1. Accident, fire, or explosion	42(8.4)	(5.7)	26 (8.0)	16 (9.2)
2. Natural Disaster	10 (2)	(1.4)	3 (0.9)	7 (4.0)
3. Non-sexual assault by a family member or acquiantance	21 (4.2)	(2.8)	17 (5.2)	4 (2.3)
4. Non-sexual assault by a stranger	3 (0.6)	(0.4)	0 (0)	3 (1.7)
5. Sexual assault by a family member or acquiantance	5 (1.0)	(0.7)	4 (1.2)	1 (0.6)
6. Sexual assault by a stranger	2 (0.4)	(0.3)	2 (0.6)	0 (0)
7. Combat or war zone	11 (2.2)	(1.5)	4 (1.2)	7 (4.0)
8. Sexual contact under age 18 with someone 5 or more years older	2 (0.4)	(0.3)	2 (0.6)	0 (0)
9. Imprisonment	11 (2.2)	(1.5)	3 (0.9)	8 (4.6)
10. Torture	5 (1)	(0.7)	0 (0)	5 (2.9)
11. Life-threatening illness	59 (11.8)	(8.0)	41 (12.6)	18 (10.4)
12. Unexpected or sudden death of a loved one	257 (51.6)	(34.7)	181 (55.7)	76 (43.9)
13. Other events	70 (14.1)	(9.5)	42 (12.9)	28 (16.2)

The other events item was chosen by 70 participants in total (9.5% of N = 740, 14.1% of N = 498) as most distressing after sudden death type of event. Since event types were not presented for the other events item (See Appendix B in PDS), the reported types of events were categorized based on participants' responses. The types of events categorized under this item are presented in Table 8. The most frequently reported event categories were divorce and relationship problems (47.1%), unemployment and financial problems (27.1%).

Table 8 Frequency and percentages of events under the most bothered 'Other Event' item

Other Event	Most Bothered PTE *N* = 70 Frequency (%)
1. Unemployment, bankruptcy, financial, workplace problems	19 (27.1)
2. Other chronic illnesses	13 (18.6)
3. Divorce, relationship problems,seperation, migration	33 (47.1)
4. Political issues, academic problems	5 (7.1)

3.2.1.3 Prevalence of TE

In order to explore research question of RQ2 and test hypothesis H1, descriptive statistics and chi-square analyses were conducted. The prevalence rate of experiencing a traumatic event during the lifetime fitting the specification of the DSM-IV-TR Criterion A of PTSD (i.e., PDS items 17 to 22, see Appendix B), was found to be 31.5% (*N* = 233 out of 740). The frequency and percentages of different kinds of TEs and the distribution according to gender are shown in Table 9.

Table 9 Frequency and percentage of experiencing traumatic events (TE)

Traumatic Events (TE)		Frequency (%)		
		N = 233	Female *N* = 156	Male *N* = 77
1.	Accident, fire, or explosion	33(14.2)	20 (12.8)	13 (16.9)
2.	Natural Disaster	6 (2.6)	2 (1.3)	4 (5.2)
3.	Non-sexual assault by a family member or acquiantance	18 (7.7)	15 (9.6)	3 (3.9)
4.	Non-sexual assault by a stranger	3 (1.3)	0	3 (3.9)
5.	Sexual assault by a family member or acquiantance	2 (0.9)	2 (1.3)	0
6.	Sexual assault by a stranger	2 (0.9)	2 (1.3)	0
7.	Combat or war zone	7 (3)	3 (1.9)	4 (5.2)
8.	Sexual contact under age 18 with someone 5 or more years older	2(0.9)	2 (1.3)	0
9.	Imprinsonment	8 (3.4)	1 (0.6)	7 (9.1)
10.	Torture	4 (1.7)	0	4 (5.2)
11.	Life-threatening illness	37 (15.9)	28 (17.9)	9 (11.7)
12.	Unexpected or sudden death of a loved one	87 (37.3)	65 (41.7)	22 (28.6)
13.	Other	24 (10.3)	16 (10.3)	8 (10.4)

As can be seen from Table 9, the most frequent event qualified as TE was unexpected death of a loved/close one (37.3%), followed by life-threatening illness (15.9%) and accident-fire-explosion (14.2%). The prevalence of TEs in lifetime in terms of gender, was found to be 48 percent (n = 156) for females (N = 325) and 44.5 percent (n = 77) for males (N = 173). However, according to Chi-square test results, males and females were not significantly different in terms of experiencing TE, χ^2 (1, n = 498) = 0.42, p = .516.

Both females (41.7%) and males (28.6%) reported unexpected death as the most frequent TE. According to Chi-square test results, females and males were not different in terms of experiencing unexpected sudden death as a TE, χ^2 (1, n = 232) = 3.24, p = .072. However, in terms of qualifying as TE or not, the differences of experiencing accident-fire-explosion, χ^2 (1, n = 498) = 17.24, p < .001, Cramer's V =.19, Non-sexual assault by a family member or acquiantance, χ^2 (1, n = 498) = 11.76, p < .01, Cramer's V =.16, Life-threatening illness, χ^2 (1, n = 498) = 34.62, p < .001, Cramer's V =.27, unexpected death, χ^2 (1, n = 498) = 34.62, p < .001, Cramer's V =.27, other events, χ^2 (1, n = 498) = 4.55, p < .05, Cramer's V =.10, were found to be significant.

3.2.2 Prevalence of Probable PTSD

In order to explore research questions of RQ3 and RQ4 and test hypothesis H2 descriptive statistics and chi-square analyses were conducted. Among participants who experienced an event qualified as traumatic (i.e., Criteria A met) (N = 233), 80 (34.3%) people have met all the criterias from A to F (see PDS in Method section) of PTSD according to DSM-IV-TR. The decision of probable PTSD or not is based on participants' scores to the scale PDS (See Appendix B). The prevalence rate of a probable PTSD was found to be 10.8 percent in the community sample as a whole (N = 740); seven percent for females, three percent for males. Among females (N = 325), 55 participants (16.9%) met the diagnosis of probable PTSD while among males (N = 173), 25 participants (14.5%) met the diagnosis. Accordingly, female and male sample were not found to be significantly different in terms of probable PTSD rates, χ^2 (1, n = 233) = 0.08, p = .783.

Table 10 Frequency and percentage of traumatic events and gender distribution related with probable PTSD

Traumatic Events (TE)	Probable PTSD *N*= 80	Female *N* = 55	Male *N* = 25
1. Accident, fire, or explosion	7 (8.8)	2 (3.6)	5 (20)
2. Natural Disaster	0	0	0
3. Non-sexual assault by a family member or acquiantance	9 (11.3)	8 (14.5)	1 (4)
4. Non-sexual assault by a stranger	1 (1.3)	0	1(4)
5. Sexual assault by a family member or acquiantance	2 (2.5)	2(3.6)	0
6. Sexual assault by a stranger	0	0	0
7. Combat or war zone	1 (1.3)	1 (1.8)	0
8. Sexual contact under age 18 with someone 5 or more years older	2 (2.5)	2 (3.6)	0
9. Imprisonment	5 (6.3)	1 (1.8)	4 (16)
10. Torture	2 (2.5)	0	2 (8)
11. Life-threatening illness	12 (15)	9 (16.4)	3 (12)
12. Unexpected or sudden death of a loved one	26 (32.5)	21(38.2)	5 (20)
13. Other	13 (16.3)	9 (16.4)	4 (16)

As can be seen from Table 10, sudden death is the most frequent (n = 26) TE reported among those fitting the specification of probable PTSD diagnosis, followed by other events (n = 13), life-threatening illness (n = 12) and non-sexual assault by a family member or acquiantance (n = 9). For probable PTSD diagnosis among the female sample, the most frequent TEs were sudden death (38.2%), followed by other events (16.4%), life-threatening illness (16.4%) and non-sexual assault by a family member or acquiantance (14.5%). Among the male sample, the most frequent TEs were sudden death (20%), and accident/fire/explosion (20%), other events (16%) and imprisonment (16%).

Among these types of events, the differences of sudden death specifying as probable PTSD or not, were found to be statistically significant, χ^2 (1, n = 498) = 13.04, $p < .001$, Cramer's V =.17.

3.2.2.1 Type of PTEs, TEs and those leading to probable PTSD

The frequency and percentages of PTEs, TEs and those leading to probable PTSD were compared within each relevant sample and presented in Table 11.

Table 11 The frequency and percentages of the list of potentially traumatic events and their sequeale as experienced, most bothered, classified traumatic and leading to probable PTSD

Events	Experienced PTE *N* = 498	Most Distressing PTE (% within PTE) *N* = 498	TE (% within PTE) *N* = 233	Probable PTSD (% within TE) *N* = 80
1. Accident, fire, or explosion	**118 (23.7**)	42(35.6)	33 (78.6)	7 (21.2)
2. Natural Disaster	72 (14.5)	10 (13.9)	6 (60)	0 (0)
3. Non-sexual assault by a family member or acquiantance	60 (12)	21 (35)	**18 (85.7)**	9(50)
4. Non-sexual assault by a stranger	36 (7.2)	3 (8.3)	**3 (100)**	1(33.3)
5. Sexual assault by a family member or acquiantance	9 (1.8)	**5 (55.6)**	2 (40)	**2(100)**
6. Sexual assault by a stranger	12 (2.4)	2 (16.7)	**2 (100)**	0(0)
7. Combat or war zone	40 (8.0)	11 (27.5)	7 (63.6)	1(14.3)
8. Sexual contact under age 18 with someone 5 or more years older	11(2.2)	2 (18.2)	**2(100)**	**2(100)**
9. Imprisonment	28 (5.6)	**11 (39.3)**	8 (72.7)	**5(62.5)**
10. Torture	21(4.2)	5 (23.8)	4 (80)	2(50)
11. Life-threatening illness	**151 (30.3)**	59 (39.1)	37 (62.7)	12(32.4)
12. Unexpected or sudden death of a loved one	**364 (73.1)**	**257 (70.6)**	87 (33.9)	26(29.9)
13. Other event	101 (20.3)	**70 (69.3)**	24 (34.3)	**13(54.2)**

As presented in Table 11, the most frequently reported PTE was unexpected/sudden death, followed by life-threatening illness and accident-fire-explosion. Among these most frequently experienced PTEs, unexpected death (70.6%) was the most distressing for the participants, followed by other event (69.3%), sexual assault by a family member/ acquiantance (55.6%).

Among these most distressing PTEs, non-sexual assault by a stranger (100%), sexual assault by a stranger (100%), sexual contact under age 18 with someone 5 or more years older (100%), and non-sexual assault by a family member/acquiantance (85.7%) were qualified as Traumatic Events. Finally, sexual assault by a family member/acquiantance (100%), sexual contact under age 18 with someone 5 or more

years older (100%), imprisonment (62.5%) and other event (54.2%) were among the most frequent TEs that lead to probable PTSD diagnosis.

3.2.2.2 Role of Socio demographic Factors on probable PTSD

Logistic regression analyses was performed to assess the impact of a number of factors on the likelihood that respondents' reported events would qualify as TEs with probable PTSD versus qualify as TEs without PTSD. The aim of this analysis was to test research question RQ4 and hypothesis H3. The model contained seven independent variables (sex, age, income, education, marital status, total number of previous PTE, previous psychiatric problem). The full model containing all predictors was statistically significant, χ^2 (7, n = 225) = 39.06, p < .001, indicating that the model was able to distinguish between respondents' reports qualifying a traumatic event with probable PTSD and qualifying a TE without probable PTSD. The model as a whole explained between 15.9% (Cox and Snell R square) and 21.9% (Nagelkerke R square) of variance in probable PTSD, and correctly classified 70.2% of cases. As shown in Table 12, four of the independent variables made a unique statistically significant contribution to the model (age, education in years, income, previous psychiatric problem). The strongest predictor of a probable PTSD was previous psychiatric problem, recording an odds ratio of 4.33. This indicated that participants who had a previous psychiatric problem were over 4 times more likely to have scores qualifying a probable PTSD than those who did not have a previous psychiatric problem, controlling for all other factors in the model. The odds ratio of .39 for income level was less than 1 (indicating a negative relationship) implying that as participants improve one point in income level (e.g., being in higher income level instead of upper medium) were .39 times less likely to have scores qualifying a probable PTSD, controlling for other factors in the model. Age was another predictor of a probable PTSD , recording an odds ratio of .97. The odds ratio of .97 for age was less than 1 (indicating a negative relationship) implying that as participants improve one point in age (e.g., being one age older) were .97 times less likely to have scores qualifying a probable PTSD, controlling for other factors in the model. Finally, for education level the odds ratio was .92 (less than 1 indicating a negative relationship), implying that as participants improve one point in education level (e.g.,

having 5 years of education instead of 4 years) were .92 times less likely to have scores qualifying a probable PTSD.

As a result of this regression analysis, a previous psychiatric problem, lower income level, younger age, lower education level increases the scores of qualifying a probable PTSD.

Table 12 Logistic Regression Predicting Likelihood of a Probable PTSD

							95% C.I.for EXP(B)	
	B	S.E.	Wald	df	*p*	Odds Ratio	Lower	Upper
Age	-.03	.01	4.92	1	.03	.97	.95	1.00
Sex	.14	.34	.17	1	.68	1.15	.59	2.22
Education (in years)	-.08	.04	3.85	1	.05	.92	.85	1.00
Marital Status	-.24	.35	.47	1	.49	.79	.40	1.56
Previous Psychiatric Problem	1.47	.37	15.82	1	.00	4.33	2.10	8.93
Income	-.95	.32	8.80	1	.00	.39	.21	.72
Total number of PTE	.15	.33	.20	1	.65	1.16	.61	2.20
Constant	1.33	.76	3.09	1	.08	3.78		

3.2.3 Comparison of Group of Event-Types on PTSD symptoms and PTG domains

Prior to further analyses, thirteen types of the potentially traumatic events (PTE) were classified into four composite groups (Breslau et al., 2004).

First group, namely intentional-assaultive violence was composed of the events such as non-sexual or sexual assault by a family member or acquiantance, non-sexual or sexual assault by a stranger, sexual contact under age 18 with someone 5 or more years older, torture. The second group, namely injury or shocking event, covers events involving accident, fire, or explosion, natural disaster, life-threatening illness. The third group, namely sudden/unexpected death involves only one event i.e., unexpected or sudden death of a loved or close one because of its high prevalence rates (Breslau et al., 1998). Finally, the fourth group, namely other-life transition problems were composed of events such as divorce, bankruptcy, relationship-marriage-family problems, work-school-political problems. This last category covers item 13 of PDS, in which the participant reported the type of event

that was not on the list. In regression analyses, the most prevalent group i.e., sudden death, was used as a comparison (dummy) variable among 4 four groups of event-types.

3.2.3.1 Role of types of events on PTSD symptoms

First, in order to test hypothesis H4, a multivariate analysis of variance (MANOVA) was performed to investigate differences across a group of events on three symptoms of PTSD. The participants' scores on symptoms of reexperiencing, avoidance, and arousal were used as the three dependent variables. The independent variable was group of event types. There was a statistically significant difference between four types of events on three dependent variables, Multivariate F (9, 1195) = 4.50, $p < .01$, Wilks' $\lambda = .92$, partial $\eta^2 = .03$.

When the results for these three symptoms were considered, (F (3, 493) = 4.22, $p < .01$, partial $\eta^2 = .027$), using Bonferroni adjusted alpha level of 0.017, through separate ANOVAs, the event groups were found to be statistically not different from each other on reexperiencing symptoms. For avoidance symptoms (F (3, 493) = 10.20, $p < .001$, partial $\eta^2 = .058$) reporting an intentional/assaultive violence group of events and other event group were statistically different from reporting injury/shocking event group and sudden death. The mean scores indicated that those who reported intentional/assaultive violence group of events and other event group had higher avoidance symptoms than those reporting injury/shocking event group and sudden death. With respect to arousal symptoms (F (3, 493) = 8.30, $p < .01$, partial $\eta^2 = .048$), the mean scores indicated that those who reported intentional/assaultive violence group of events had higher arousal symptoms than of those reported injury/shocking event group and sudden death. The mean scores for the groups are shown in Table 13.

Table 13 Means of three PTSD symptoms across four groups of events

	Reexperiencing	Avoidance	Arousal
Intentional/assaultive violence	1.28	0.99_a	1.45_a
Injury/shocking event	0.90	0.64_b	0.90_b
Sudden death	0.96	0.64_b	0.85_b
Other- life transition problems	1.23	1.11_a	1.23_{ab}

Note. The mean scores that do not share the same subscript on the same column are significantly different from each other at 0.017 level.

3.2.3.2 Role of traumatic event types on Posttraumatic Growth

With respect to aims of this study, posttraumatic growth was another outcome variable in the aftermath traumatic events. Since exposing a traumatic event not always leading bad consequences, some factors may contribute to developing positive consequences via a traumatic experience. The five areas of growth was presumed to be namely, new possibilities, spiritual change, relating to others, personal strength, appreciation of life. Thus, the first analysis was to test the hypothesis (H6) related to the association of event-types and PTG domains.

A multivariate analysis of variance (MANOVA) was conducted to explore the impact of group of event types on five factors of posttraumatic growth, as measured by PTGI. There was a statistically significant difference between four groups of events and PTG domain scores, multivariate F (9, 1197) = 4.84, $p < .001$, Wilks' $\lambda = 0.29$, partial $\eta^2 = .92$.

Post-hoc comparisons through separate ANOVAs using Bonferroni adjusted alpha level of 0.01, indicated a statistically significant difference only on appreciation of life (F (3, 494) = 7.08, $p < .01$, partial $\eta^2 = .041$) across four groups of event. The mean scores indicated that those who reported group of injury/shocking events (M = 3.60, SD =1.64) experienced higher levels of appreciation of life than those reporting intentional/assaultive violence events (M = 2.62, SD =1.71) and other group of events (M = 2.60, SD = 1.80).

Table 14 Means of five PTG domains across four groups of events

	New Possibilities	Spiritual Change	Relating to Others	Personal Strength	Appreciation of Life
Intentional/assaultive violence	2.39	2.62	2.04	3.20	2.62_b
Injury/shocking event	2.64	3.16	2.52	3.73	3.60_a
Sudden death	2.33	3.16	2.43	3.31	3.17_{ab}
Other- life transition problems	2.65	2.66	1.91	3.35	2.60_b

Note. The mean scores that do not share the same subscript on the same column are significantly different from each other at 0.01 level.

3.2.4 Hierarchical Regression Analyses

In this section, two separate hierarchical regression analyses were conducted in order to see possible effects of sociodemograhic variables, personality traits, event-related variables, and posttrauma factors associated with either PTS symptom severity or PTG. Two main outcome variables (i.e., PTS symptom severity and PTG) were the focus of interest.

3.2.4.1 Variables associated with Posttraumatic Stress Symptom Severity

A hierarchical multiple regression analysis was performed to reveal the significant associates of measures of posttraumatic stress symptom severity; namely reexperiencing, avoidance, and arousal (RQ7, H5 to H11). As shown in Table 15, variables were entered into the equation via four steps. In order to control for the possible effects of socio-demographic variables (i.e., gender, age, education, marital status, income level, previous psychiatric problem), these were entered in the equation in the first step, labeled as control variables. In the second step, Personality variables (i.e., extraversion, conscientiousness, neuroticism, openness to experience, negative valence, agreeableness), followed by Event-related factors (i.e., type of events, time elapsed since trauma, duration of symptoms, total impairment of functioning), and finally Posttrauma variables (i.e., perceived social support, ways of coping, rumination styles) were included in the equation via stepwise method.

According to the results of the analysis, when all variables were in the equation, in the last step, R^2 value of .64 (adjusted R^2 = .63) indicated that more than half (64%) of the variability in symptom severity was explained by some of the variables entered into the equation, F (15, 465) = 56.09, $p < .001$.

In the final step, when all variables were in the equation among control variables, age (β = -.08, t = -2.56, $p < .05$), gender (β = -.07, t = -2.47, $p < .05$), and income (β = -.10, t = -3.12, $p < .01$) were negatively associated with symptom severity. These control variables explained 20% of variance in symptom severity, (F (6, 474) = 18.54, $p < .001$).

Table 15 Variables according to steps in regression analyses

Variables in set		Method
I. *Control variables*		Enter
	Age	
	Gender (0:Female, 1:Male)	
	Marital Status (0:Married, 1: Not Married)	
	Education	
	Income	
	Previous Psychiatric Problem (0:No, 1:Yes)	
II. *Personality*		Stepwise
	Extraversion	
	Conscientiousness	
	Neuroticism	
	Openness to Experience	
	Negative Valence	
	Agreeableness	
III. *Event-related variables*		Stepwise
	Intentional/assaultive violence vs Sudden death	
	Injury/shocking event vs Sudden death	
	Other event vs Sudden death	
	Duration of symptoms	
	Time elapsed since Trauma	
	Total impairment of functioning	
IV. *Posttrauma Variable*s		Stepwise
	Perceived support from family	
	Perceived support from friend	
	Perceived support from other	
	Intrusive Rumination	
	Deliberate Rumination	
	Problem-Focused Coping	
	Seeking Support Coping	
	Fatalistic Coping	
	Helplessness Coping	

From personality variables, in the final step only neuroticism (β = .11, t = 3.69, p < .001) was positively associated with symptom severity. Among personality variables, extraversion (β = -.07, t = -2.21, p < .05) remained negatively associated with symptom severity until intrusive rumination was entered in equation. Personality variables incremented 11% of variance explained in symptom severity (R^2 change = .11).

Among event-related factors, intentional/assaultive violence type of the events as compared to sudden death (β = .09, t = 3.03, p < .01), total impairment of functioning (β = .35, t = 10.49, p < .001), duration of symptoms (β = .21, t = 7.05, p < .001) were positively associated, while time elapsed since trauma (β = -.11, t = -

3.81, $p < .001$) was negatively associated with symptom severity. Event-related variables improved 28% of explained variance in symptom severity (R^2 change = .28).

Finally, intrusive rumination ($\beta = .19$, $t = 5.13$, $p < .001$), deliberate rumination ($\beta = .10$, $t = 2.80$, $p < .01$), fatalistic coping ($\beta = .14$, $t = 4.30$, $p < .001$) were among posttrauma variables that were positively associated with symptom severity. With the inclusion of these posttrauma variables, explained variance in symptom severity improved 6% (R^2 change = .28). Table 16 summarizes the results of regression analysis.

Table 16 Variables associated with symptom severity

Block	Beta (β *within set*)	*t* (within set)	*t* (last step)	Partial *r* (last step)	Model R^2
Dependent Variable: Symptom Severity					
I. *Control variables*					.19
Age	-.12	-2.88**	-2.56*	-.12	
Gender	-.15	-3.56***	-2.47*	-.11	
Marital Status	.05	1.24	.05	.00	
Education	-.10	-2.08*	.59	.03	
Income	-.23	-4.99***	-3.12**	-.14	
Previous Psychiat. Problem	.22	5.22***	1.32	.06	
II. *Personality*					
Neuroticism	.27	6.49***	3.69***	.17	.30
Extraversion	-.14	-3.26**	-1.58	-.07	
III. *Event-related variables*					.58
Int./ass. violence vs death	.07	2.39*	3.03**	.14	
Time elapsed since trauma	-.14	-4.38***	-3.81	-.17	
Duration of symptoms	.25	7.66***	7.05***	.31	
Impairment of functioning	.44	12.58***	10.50***	.44	
IV. *Posttrauma Variable*s					.64
Intrusive Rumination	.19	5.13***	5.13***	.23	
Fatalistic Coping	.14	4.30**	4.30**	.20	
Deliberate Rumination	.10	2.80**	2.80**	.13	

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

3.2.4.2 Variables associated with Posttraumatic Growth (PTG)

A hierarchical multiple regression analysis was performed to reveal the significant associates of posttraumatic growth (PTG). As can be followed from Table 15 above (see pp 83), same group of variables were entered into the equation via four steps. In order to control for the possible effects of socio-demographic variables (i.e., gender, age, education, marital status, income level, previous psychiatric problem), these were entered in the equation in the first step, labeled as control variables. In the second step, Personality variables (i.e., extraversion, conscientiousness, neuroticism, openness to experience, negative valence, agreeableness), followed by event-related variables (i.e., type of events, duration of symptoms, time elapsed since trauma, total impairment of functioning), and finally Posttrauma variables (i.e.,perceived social support, ways of coping, rumination styles) were included in the equation via stepwise method.

Table 17 Variables associated with posttraumatic growth

Block	Beta (β *within set*)	*t* (within set)	*t* (last step)	Partial *r* (last step)	Model R^2
Dependent Variable: Posttraumatic Growth					
I. *Control variables*					.03
Age	-.08	-1.62	-4.02***	-.18	
Gender	-.07	-1.52	.38		
Marital Status	-.04	-.84	.28		
Education	-.13	-2.45*	-2.42*	-.11	
Income	-.03	-.52	-.10		
Previous Psychiat. Problem	-.00	-.08	-1.02		
II. *Personality*					.16
Conscientiousness	.18	3.45**	2.24*	.10	
Openness to experience	.17	3.55***	1.87		
Agreeableness	.14	2.72**	.60		
III. *Event-related variables*					.18
Injury/shock. event vs death	.11	2.51*	3.02**	.14	
Duration of symptoms	.09	2.11*	2.12*	.10	
IV. *Posttrauma Variable*s					.38
Deliberate Rumination	.28	7.09***	7.09***	.31	
Problem-solving Coping	.15	2.90**	2.90**	.13	
Perc. support from friend	.13	3.07**	3.07**	.14	
Perc. supp. from sig other	.13	3.18**	3.18**	.15	
Seeking support Coping	.14	2.78**	2.78**	.13	

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

According to the results of the analysis (see Table 17), when all variables in the equation, in the last step, R^2 value of .38 (adjusted R^2 = .36) indicated that 38% of the variability in PTG was explained by some of the variables entered into the equation, F (16, 464) = 17.90, $p < .001$.

In the final step, when all variables were in the equation among control variables, age (β = -.16, t = -4.02, $p < .001$), and education level (β = -.10, t = -2.42, $p < .05$) were negatively associated with PTG. Interestingly, in the first step, age (β = -.08, t = -1.62, p = .11) was a nonsignificant, until conscientiousness was entered in the equation in the second step.

From personality variables, in the final step only conscientiousness (β = .10, t = 2.24, $p < .05$) was positively associated with PTG. Among personality variables, both openness to experience (β = .16, t = 3.58, $p < .001$) and agreeableness (β = .12, t = 2.37, $p < .05$) remained positively associated with PTG until problem-solving coping was entered in equation.

Among event-related factors, injury/shocking type of event group (β = .11, t = 3.02, $p < .01$) as compared to sudden death and duration of symptoms (β = .08, t = 2.12, $p < .05$) were significantly associated with PTG.

Finally, deliberate rumination (β = .28, t = 7.09, $p < .001$), problem-solving coping (β = .15, t = 2.90, $p < .01$), perceived social support from friend (β = .13, t = 3.07, $p < .01$), and from significant other (β = .13, t = 3.18, $p < .01$), and seeking support coping (β = .14, t = 2.78, $p < .01$) were among posttrauma variables that were positively associated with PTG.

3.3 Model Testing

A Structural Equation Modeling (SEM) analysis was performed via LISREL 8.8 in order to test the hypothesized model (RQ7). Prior to analysis, the data (N = 740) were screened and only the cases that reported at least one potentially traumatic event as distressing (n = 498) were included for further analysis. The corresponding covariance matrix was obtained from the SPSS data file.

The proposed model examined the predictors of posttraumatic stress symptoms severity (Symptom Severity) and posttraumatic growth levels (PTG). The model as a whole was composed of main variables, namely Personality, Event-related Factor, Perceived Social Support, Event-Related Rumination, Ways of

Coping, Posttraumatic Symptom Severity, Posttraumatic Growth. These are summarized in Table 18.

Table 18 Main variables used in the proposed model

Pretrauma	
Personality	Neuroticism, Agreeableness, Conscientiousness, Openness to Experience, Extraversion, Negative Valence (measured by BPTI)
Peritrauma	
Event-related factor	Reported event-severity during trauma (measured by PDS items 17, 18, 19, 20, 21, 22)
Posttrauma	
Perceived Social Support	Perceived support from Family, Friend, Significant Other (measured by MSPSS)
Event-related Rumination	Intrusive Rumination, Deliberate Rumination (measured by ERRI)
Ways of Coping	Fatalistic coping, Helplessness Coping, Problem solving coping, Seeking support coping (measured by T-WCI)
Outcome	
Symptom Severity	Three PTSD symptoms; Reexperiencing, Avoidance, Arousal (measured by PDS items 23 to 39)
Posttraumatic Growth	New possibilities, Spiritual change, Relating to others, Personal Strength, Appreciation of life (measured by PGTI)

However, the measurement model has been constructed by separating some of the indicators of main variables in order to see their unique contribution on the relationships. Ten latent variables and their indicators of the measurement model are summarized in Table 19. Since neuroticism has been repeatedly found to be related with posttraumatic stress symptoms, with maladaptive ways of coping and intrusive rumination styles, it has been examined as a separate latent variable, namely Neuroticism-Personality. Other personality traits such as agreeableness, conscientiousness, openness to experience, extraversion, negative valence (inversely loaded) served as indicators of the Other-Personality factor. Among peritrauma factors, only reported event severity was taken as an indicator. Perceived social support from friend, family and significant other were three indicators serving for the perceived social support latent variable. Since two styles of rumination were hypothesized to have impacts on different outcomes, intrusive rumination and

deliberate rumination were considered to be two latent variables and scale items served as indicators. Likewise, ways of coping were classified as Active Coping and Emotion-focused Coping. Seeking support coping and problem-solving coping were two indicators of Active ways of coping, while helplessness coping and fatalistic coping were regarded as two indicators of Emotion-focused Coping. The outcome variables were labeled as Symptom Severity and PTG. Posttraumatic stress symptoms such as reexperiencing, avoidance and arousal served as indicators of Symptom-Severity factor. Posttraumatic growth dimensions such as new possibilities, spiritual change, relating to others, personal strength, appreciation of life served as indicators of PTG.

Table 19 Latent Variables and Indicators in the model

Latent Variables	**Indicators**
Neuroticism	Nine items of neuroticism personality trait (measured by BPTI)
Other Personality Traits	Agreeableness, Conscientiousness, Openness to experience, Extraversion, Negative Valence* (measured by BPTI)
Event Severity	Reported event-severity during the event (measured by PDS items 17, 18, 19, 20, 21, 22)
Perceived Social Support	Perceived support from Family, from Friend, from Significant Other (measured by MSPSS)
Intrusive Rumination	Ten items of intrusive rumination factor (measured by ERRI)
Deliberate Rumination	Ten items of deliberate rumination factor (measured by ERRI)
Active Coping	Problem solving coping, Seeking support coping (measured by T-WCI)
Emotion-focused Coping	Fatalistic coping, Helplessness Coping (measured by T-WCI)
PTS Symptom Severity	Reexperiencing, Avoidance, Arousal (measured by PDS)
Posttraumatic Growth	New possibilities, Spiritual change, Relating to others, Personal Strength, Appreciation of life (measured by PGTI)

*Negative valence was negatively loaded to Other-personality latent variable, prior transformation.

The hypotheses of this study were summarized on this comprehensive model as follows; neuroticism would significantly increase the reported event-severity and intrusive rumination (H8), thus increase symptom severity (H17), whereas other-personality traits would significantly decrease the reported event-severity and increase deliberate rumination (H9), thus increase PTG (H18). While neuroticism

would lead to engagement in more emotion-focused ways of coping (H8), which in turn increase symptom severity (H21), other-personality traits would lead to more active ways of coping (H9), which in turn increase levels of PTG (H22). Reported event-severity would activate both intrusive and deliberate rumination (H10). Additionally, reported event-severity would be negatively related to perceived social support in the aftermath of trauma (H11). High perceived social support would contribute engaging in more active ways of coping (H12). Intrusive rumination would significantly predict experiencing higher PTS symptoms severity(H13), whereas deliberate rumination styles would significantly predict developing higher levels of PTG and lower symptom severity (H15). Intrusive rumination would increase emotion-focused ways of coping thus increase symptom severity (H14, H19), whereas deliberate rumination would increase active ways of coping, thus increase levels of PTG (H16, H20) and decrease symptom severity (H20). Neuroticism will increase engaging in intrusive ruminationFinally, higher PTS symptom severity would lead to develop higher levels of PTG (H23).

In order to test the hypotheses (H8 to H22) of this proposed model, a structural equation model (SEM) was performed. In the analysis, data fit indices such as χ^2, ratio of χ^2 to degree of freedom (*df*), Root Mean Square Error of Approximation (RMSEA), and Non-Normed Fit Index (NNFI) were assessed. For the ratio between χ^2 and *df*, values between 1 and 5, for RMSEA 0.0 and 0.08, for NNFI and CFI values higher than 0.90 were evaluated as acceptable criteria.

The paths between other-personality traits and event-severity, between event-severity and perceived social support, between Symptom Severity and PTG were found to be the nonsignificant paths, thus removed from the model for further analyses. Since some of the indicators were presumed to be dependent on each other, their error covariances were correlated within latent variables. Only one indicator of emotion-focused coping, namely fatalistic coping was suggested to be related to seeking support coping, which was an indicator of another latent variable, namely active coping. Therefore, the errors between fatalistic coping and seeking support coping were correlated. This was the only modification performed across latent variables.

After the modifications were performed, the model provided a good fit to the data with statistically significant chi-square value, χ^2 (1131, N = 498) = 2476.92, p < .001, (χ^2/ df = 2.19), and with other fit indices; RMSEA = .049 (C.I. 0.046-0.052), NNFI = .96, CFI =.96. The finalized structural model, with standardized structural coefficients is presented in Figure 2. The elipse shapes represent latent variables and rectangles represent indicators. The absence of a line connecting latent variables implies lack of a significant direct effect.

The standardized regression coefficients (loadings) of indicators on each of the latent variables ranges from .30 to .95 (with a median level of .69). However, in order to illustrate the model in a simpler format, the error variances of each indicator, and the indicators of Neuroticism, Intrusive Rumination and Deliberate Rumination were not included in the figure. Across latent variables while the most powerful relationship (.54) was obtained between the active ways of coping and PTG, whereas the least powerful relationship (-.11) was obtained between active ways of coping and symptom severity.

Direct Effects

As shown in Figure 5, neuroticism yielded three direct effects, implying that higher levels of neuroticism was significantly predictive of perceiving more event-severity (t = 3.50, p < .01), engaging in more intrusive rumination (t = 4.08, p < .01), and more emotion-focused coping (t = 3.76, p < .01). The direct paths from other-personality traits to both deliberate rumination and active coping were positively significant, indicating that higher levels of other-personality traits significantly predicted greater deliberate rumination (t = 3.33, p < .01), and more active ways of coping (t = 7.60, p < .01).

With respect to event-severity, increased severity perception significantly predicted higher levels of engaging in both more intrusive (t = 3.12, p < .01), and deliberate rumination (t = 3.17, p < .01).

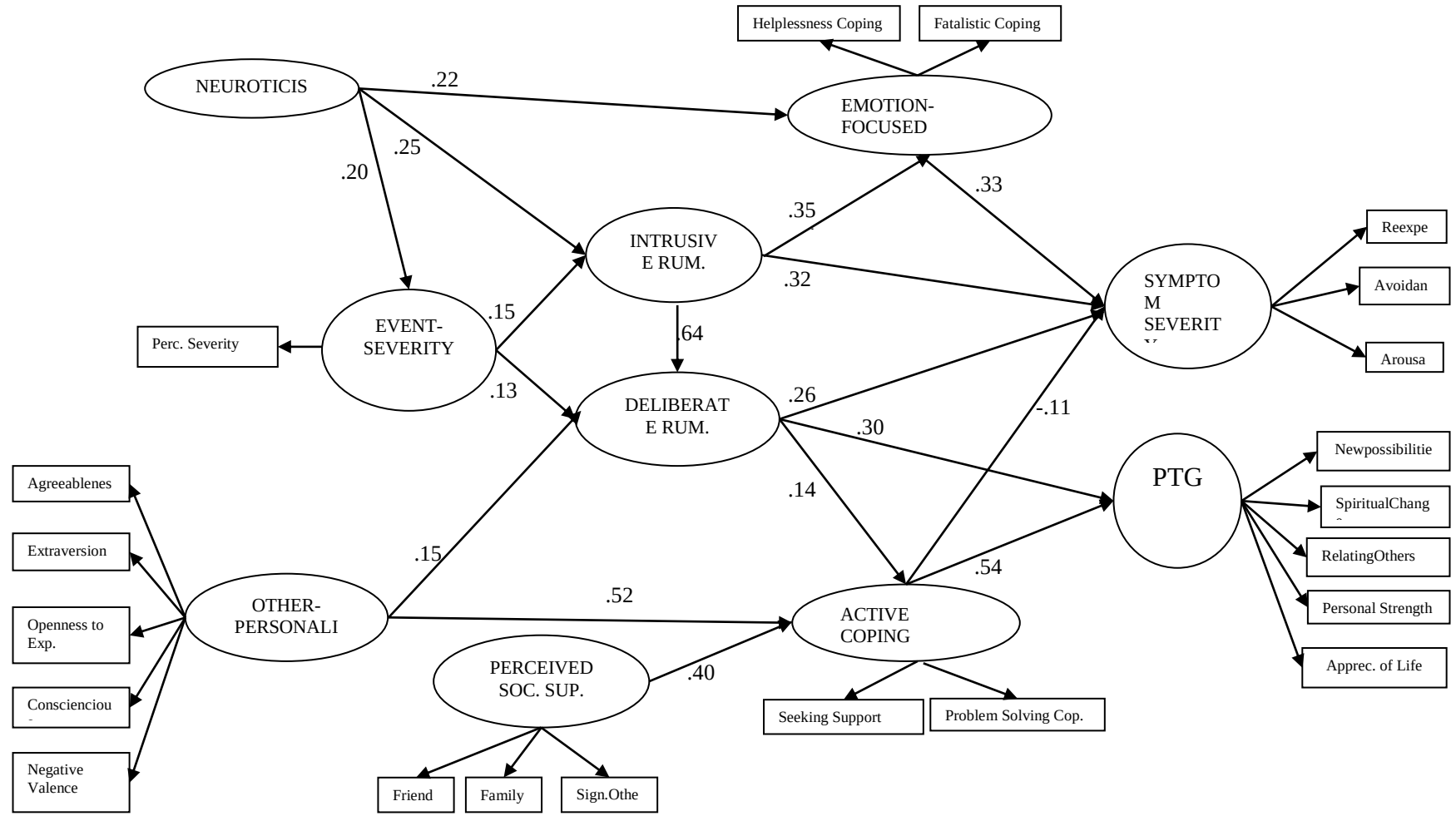

Figure 5 The Structural Model

With respect to rumination, increased levels of deliberate rumination significantly predicted higher levels of PTG (t = 6.22, p < .01) and higher levels of symptom severity (t = 4.11, p < .01), while increased levels of intrusive rumination significantly predicted higher symptom severity (t = 4.99, p < .01). Furthermore, the direct paths from rumination to ways of coping revealed that intrusive rumination leads to more emotion-focused coping (t = 7.17, p < .01), while deliberate rumination leads to more active coping (t = 2.96, p < .01). The direct path from perceived social support to active coping was positively related to active ways of coping (t = 4.95, p < .01).

The direct path from active coping to PTG was positively significant (t = 9.82, p < .01), while direct path from active coping to symptom severity was negatively significant (t = -2 .43, p < .05). These paths indicated that increased levels of active ways of coping, leads to developing higher levels of PTG, while decreasing posttraumatic stress symptom severity. On the other hand, the direct path from emotion-focused coping to symptom severity was significant, indicating that those using more emotion-focused coping were experiencing higher levels of symptom severity (t = 4.87, p < .01).

Indirect effects

The significance of the intervening variables was evaluated using tests of indirect effects (Sobel, 1988; cited in Tabachnick & Fidell, 2007). This method of examining intervening variables has claimed to have more power than the mediating variable approach (Baron & Kenny, 1986; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; cited in Tabachnick & Fidell, 2007).

The indirect effect of neuroticism on symptom severity was .24 (t = 4.82, p < .01) via reported event-severity, intrusive rumination, deliberate rumination, and emotion-focused coping. The results yielded that increased levels of neuroticism predicted increased levels of emotion-focused coping which in turn leads to higher levels of symptom severity. Another path indicated that those with higher neuroticism that perceived greater event-severity, engaged in more intrusive rumination and/or more deliberate rumination, which predicted higher levels of symptom severity.

However, the findings also yielded positive outcomes (i.e., PTG) of neuroticism via deliberate rumination. The indirect effect of neuroticism on PTG was significant .08 (t = 3.93, p < .01), which showed that if those with higher neuroticism, perceived high event-severity, via more deliberate rumination, may develop higher levels of PTG. One interesting finding revealed that while indirect effect of deliberate rumination on PTG via active coping was significant .07 (t = 2.85, p < .01), the indirect effect of deliberate rumination via active coping on symptom severity was not significant -.01 (t = -1.86, p = ns). This implies that although active coping directly has a role in decreasing symptom severity, when used with deliberate rumination its diminishing role in symptom severity disappears.

The total effect of intrusive rumination on symptom severity was .59 (t = 12.10, p < .01) and on deliberate rumination was .64 (t = 11.49, p < .01), and total effect of active coping on growth was .54 (t = 9.82, p < .01).

As hypothesized, intrusive rumination significantly predicted emotion-focused coping, thus symptom severity, while deliberate rumination significantly predicted active coping, thus PTG. When intrusive rumination contributed to deliberate rumination, then higher neuroticism and/or higher levels reported event-severity significantly predicted PTG.

The indirect effect of other personality dimension on PTG via active coping and/or deliberate rumination was .34 (t = 7.08, p < .05). The results revealed that when those with other-personality traits, engaged in more deliberate rumination and/or active ways of coping, then this would increase developing higher levels of PTG. However, the indirect effect of other-personality traits on symptom severity via deliberate rumination and/or active coping, was not significant -.02 (t = -0.67, p = ns).

The indirect effect of perceived social support on PTG via active coping was .22 (t = 4.57, p < .01), while the indirect effect of perceived social support on symptom severity was also significant -.04 (t = -2.20, p < .05). This indicated that higher levels of perceived social support, increased levels of engaging in active ways of coping, which in turn increased levels of PTG and decreased symptom severity.

Indirect effects on symptom severity can be followed from Table 20 and indirect effects on PTG can be followed from Table 21.

Table 20 Indirect Effects Associated with Symptom Severity

1.	Neuroticism	Emotion-focused cop.		
2.	Neuroticism	Intrusive Rumin.		
3.	Neuroticism	Intrusive Rumin.	Emotion-focused cop.	
4.	Neuroticism	Event-severity	Intrusive Rumination	
5.	Neuroticism	Event severity	Intrusive Rumination	Emotion-focused cop
6.	Neuroticism	Event severity	Deliberate Rumination	
7.	Neuroticism	Event severity	Intrusive Rumination	Deliberate ruminat.
8.	Perceived support	Active coping		

Table 21 Indirect Effects Associated with PTG

1.	Other-Personality	Active Coping		
2.	Other-Personality	Deliberate Rumination		
3.	Other-Personality	Deliberate Rumination	Active Coping	
4.	Neuroticism	Event-Severity	Deliberate Rumination	
5.	Neuroticism	Event-Severity	Deliberate Rumination	Active Coping
6.	Neuroticism	Intrusive Rumination	Deliberate Rumination	
7.	Neuroticism	Intrusive Rumination	Deliberate Rumination	Active Coping
8.	Perceived support	Active coping		

As a result, 52% of the variance on Symptom Severity and 45% of the variance on PTG was explained by the model. The explained variance of endogenous and outcome variables were summarized in Table 22.

Table 22 Explained variance of endogeneous variables

Variables in the Model	R^2
Symptom Severity	0.52
PTG	0.45
Intrusive Rumination	0.10
Deliberate Rumination	0.47
Active Ways of Coping	0.63
Passive Ways of Coping	0.21

3.3.1 The association between symptom severity and PTG

Moreover, a simpler SEM was performed to see (RQ8) the relationship between two outcome variables (symptom severity and PTG). In this comprehensive model, the hypothesis (H23) that higher symptom severity would lead developing higher PTG was not supported. However, in order to see the relation between symptom severity and PTG, a simpler model was tested. This model was constructed

by five latent variables namely, event-severity, intrusive rumination, deliberate rumination, symptom severity and PTG. The paths are presented in Figure 6. The model provided a good fit to the data with statistically significant chi-square value, χ^2 (355, N = 498) = 717.51, p < .001, (χ^2/ df = 2.02), and with other fit indices; RMSEA = .045 (C.I. 0.041-0.050), NNFI = .98, CFI =.98.

The standardized regression coefficients (loadings) of indicators on each of the latent variables ranges from .44 to .83 (with a median level of .71). In order to illustrate the model in a simpler format, the error variances of each indicator, and the indicators of Intrusive Rumination and Deliberate Rumination were not included in the figure. Among latent variables while the most powerful relationship (.64) was obtained between intrusive rumination and symptom severity, whereas the least powerful relationship (-.11) was obtained between symptom severity and PTG.

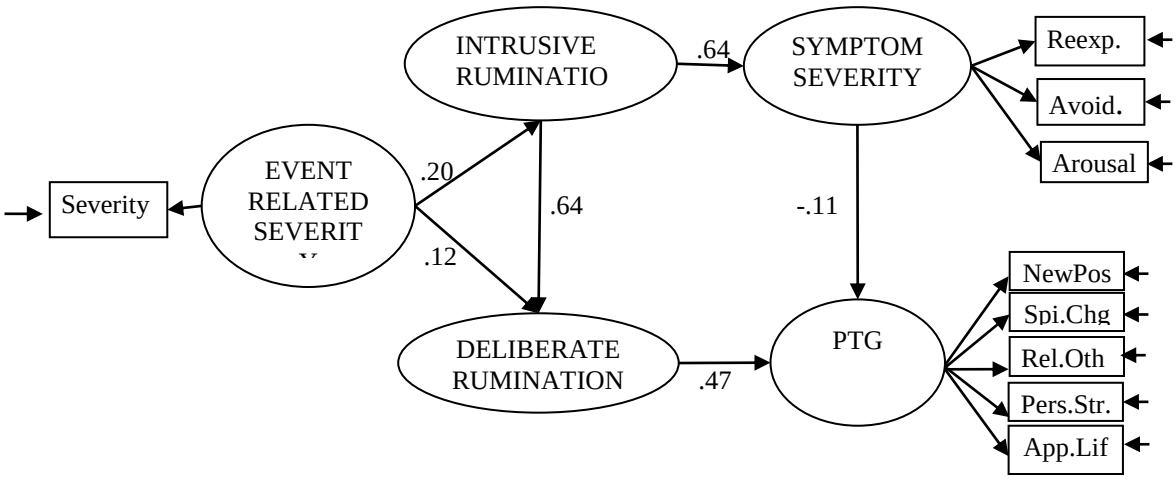

Figure 6 The Structural Model on PTG

Direct effects

As shown in Figure 6, in line with previous findings in this study, the direct effect of event-severity predicted both intrusive (t = 4.31, p < .01) and deliberate rumination (t = 4.99, p < .01). Intrusive rumination yielded two direct effects,

implying that higher levels of intrusive rumination was significantly predictive of experiencing more symptom-severity (t = 13.11., p < .01), and engaging in more deliberate rumination (t = 11.47, p < .01). The direct effect of deliberate rumination on growth indicated that those who engage in deliberate rumination developed higher levels of PTG (t = 7.48, p < .01). However, although a positive association was proposed between symptom severity and PTG, the results yielded a negative yet significant direct effect (t = -2.05, p < .05). This weak association indicated that as symptom severity diminishes, higher levels of PTG is developed.

Indirect effects

The indirect effect of event severity on PTG via intrusive rumination, deliberate rumination, and symptom severity was .10 (t = 4.22, p < .01), while the indirect effect of event severity on symptom severity was .13 (t = 4.16, p < .01). This indicated that higher levels of event-severity, increased levels of engaging in both intrusive and/or deliberate rumination. Those who reported greater event severity, with more intrusive rumination, they may experience greater symptom severity, which in turn decreases growth levels. However, if intrusive rumination leads to deliberate rumination, then the individual may develop PTG even they perceived high event-severity.

The indirect effect of intrusive rumination on growth was .23 (t = 5.53, p < .01) via symptom severity and deliberate rumination. In short, intrusive rumination increased developing growth following traumatic events via deliberate rumination, whereas via symptom severity intrusive rumination leads to decreased levels of PTG.

As a result, 41% of the variance on Symptom Severity and 19% of the variance on PTG was explained by the model. The explained variance of endogenous and outcome variables were summarized in Table 23.

Table 23 Explained variance of endogeneous variables

Variables in the Model	R^2
Symptom Severity	0.41
PTG	0.19
Intrusive Rumination	0.46
Deliberate Rumination	0.40

CHAPTER 4

DISCUSSION

4.1 Overview

The general purpose of this study was to examine both the prevalence rates of experiencing different types of traumatic events and probable PTSD, and the factors associated with the diverse outcomes of traumatic events, specifically posttraumatic stress symptom severity and posttraumatic growth.

This chapter is a discussion of the findings of the study and related concepts and variables under three main topics, namely, (1) Prevalence rates of traumatic events and probable PTSD, (2) Variables related to Posttraumatic Stress Symptom Severity, and (3) Variables related to Posttraumatic Growth.

Main findings of the current study will be discussed in line with the research questions and hypotheses (see pp. 43) and related literature. In the final part of this chapter, the strengths and the limitations of the study , and the clinical implications of the study will be discussed and suggestions for future research will be provided.

4.2 Prevalence rates of different traumatic events and probable PTSD

Many studies have been conducted throughout the world in order to determine the prevalence rates of experiencing at least one traumatic event over the life time. Varying rates were found ranging from 55 to 90% (Boals et al., 2013; Frans et al., 2005; Breslau et al., 2004; Flett et al, 2004; Norris et al., 2003; Kessler et al., 1995; Darves-Bornoz et al., 2008; Karancı et al., 2012). Although the prevalence of exposure to traumatic stressors were high, the prevalence rates of PTSD in community-based studies, ranged between 1–9.2% (Vasterling & Brewin, 2005). These differences in prevalence rates of PTSD were considered to be a result of the use of various sampling methodology and the differences in types of the events.

The results of the present study showed that the rate of experiencing at least one potentially traumatic event (PTE) in lifetime is 67.3%, which is within the range of previous findings. In the present study, the prevalence rate of experiencing a traumatic event during the lifetime that fitted the specification of the DSM-IV-TR

Criterion A of PTSD was 31.5%, whereas the prevalence rate of a probable PTSD was found to be 10.8%. Although females (16.9%) had a slightly higher prevalence rate than males (14.5%), in meeting the diagnosis of probable PTSD, this difference was found to be insignificant. Thus, one of the hypotheses (H2) of this study, stating that females' will have a higher prevalence of probable PTSD, was not supported. However, experiencing sudden death was found to be less likely to qualify a probable PTSD, as compared to no PTSD group. Accordingly, although the most frequent and distressing potentially traumatic events (PTEs) among different types of events was reported as unexpected/sudden death, events that qualified as Traumatic Events (TEs) were non-sexual assault by a family member/acquaintance (i.e., intentional/assaultive violence), accidents, and life threathening illnesses. Sudden death and other event types were less likely to qualify as TE compared to no TE. Though frequencies were different due to gender and types of events, males and females were not significantly different in terms of events qualifying as a TE. So, the results did not support the hypothesis (H1) that rates of experiencing events qualifying as TE will be significantly different due to event-types for males and females.

Among the most frequent TEs that lead to probable PTSD were sexual assault by a family member/acquaintance, sexual contact under age 18 with someone 5 or more years older, imprisonment (i.e., intentional/assaultive violence) and interestingly other events (i.e., other-life transition problems). The results of a recent study (Mulder et al., 2013) revealed that non-traumatic life events (i.e., Criteria A of PTSD not met) were also associated with PTSD symptoms. Previous studies also demonstrated this link between PTSD symptoms and a wide range of non-traumatic events such as marital problems (Dattilio, 2004), employment related stressors, and bereavement (Zisook et al.1998). Therefore, the impact of such non-traumatic events and the underlying mechanisms leading to probable PTSD may be the focus of interest in future studies. In the present study, these types of events were grouped in 'other event' category and showed significantly higher levels of avoidance symptoms. One explanation can be that these avoidance symptoms lead these types of experiences/events to probable PTSD. However, another suggestion is that such events might be the derivatives of experiencing traumatic events or avoidance

symptom may also be related to depression which is not assessed in this research study. Hence, for those who report such event-types, the aversive details of the events may be investigated in more detail via qualitative analyses.

Previous findings reported different types of events as most frequent and distressing, however some of the results emphasized the role of high probability of encountering different types of events depending on gender. For example, an epidemiological study among U.S. population (Kessler et al, 1995), showed that men experienced more accidents than women, whereas women experienced rape, and assaultive violence type of events (Breslau et al., 2004) more than men. Accordingly, in the present study, exposing to the potentially traumatic events (PTE) were found to be significantly different for gender. The results showed that males, compared to females, were more exposed to non-sexual assault by a stranger, combat/war zone, imprisonment and torture.

The reason for the results not to support the first two hypotheses, may be related to concealment of some events such as intentional/assaultive violence. To express or disclose such events, where some of them even directed a family member or acquaintance, may be difficult when participating a survey and meeting the researcher for the first and last time. This may cause such events to be underreported. Although principles of confidentially were declared clearly, disclosure of trauma to someone stranger may be hard for the participants. Therefore, underreporting such events might have prevented to make accurate conclusions for either of the gender groups.

After examining the effects of different types of events and gender on events qualifying as traumatic and probable PTSD, sociodemographic factors that may have an influence on probable PTSD were examined (RQ4). The previous research stated that being male, young age, low income level, low education level were risk factors for encountering more traumatic experiences (Frans et al., 2005; Breslau et al., 1991), while being female, old age, low education and income levels (Davidson et al., 1991), preexisting psychiatric disorder history were related to PTSD (Norris et al., 2003; Perkonigg et al., 2000). In a study with a Turkish adult community sample being female, low level of education and income, being middle aged seemed to be risk factors for being exposed to traumatic events and developing PTSD. So, in

respect to sociodemographic variables it was hypothesized that being female, single, younger, having low-education and low-income level would predict probable PTSD (H3). Likewise, a previous psychiatric problem and the greater number of previously experienced negative events will lead to probable PTSD. The results of the regression analysis revealed that lower income level, younger age, lower education level, a previous psychiatric problem increased the scores of qualifying for a probable PTSD. Gender again was not significant in meeting the diagnosis of PTSD (H3 partially supported). However, this lack of difference in qualifying for a diagnosis, may become different on the levels of stress symptoms in the aftermath of traumatic events (i.e., symptom severity scores may be different for males and females). Another reason for the lack of gender differences, might be due to the differences in processing the event or the coping strategies employed. Additionally, it can be suggested again that since some of the types of events are more difficult to express for either gender, some event types might be underreported in either gender which may preclude making comparison and analysis of the results.

In regard to being exposed to similar events or traumatic events in the other category, previous research findings revealed significant relation between exposure to more trauma and PTSD (Frans et al, 2005; Breslau et al., 1991). Among people suffering from PTSD, the mean number of potentially traumatic events in lifetime were reported as three (Darves-Bornoz et al., 2008). According to the results of the present study, the mean number of encountering at least one potentially traumatic event was reported as 2.05, but no statistically significant relation was obtained in relation to probable PTSD. Moreover, more recent results from a 30-year longitudinal study (Mulder et al., 2013) showed that being previously exposed to five or more traumatic or adverse life events were significantly related to higher PTSD symptoms. So the mean number was relatively lower as compared to previous research findings, but the bivariate correlations showed a positive correlation between total number of events and event-severity (peritrauma), and between total number of events and symptom severity. These results may indicate that for probable PTSD rather than total number of events, sociodemographic factors can be considered as a risk factor.

Some researchers emphasized that the consequences of experiencing a traumatic event may differ according to the type of the event (Breslau, 1998), whereas others (McNally, 2003) stated that it is not just the type of event, but rather some other subjective variables having impact on the development of PTSD (Ozer et al., 2003; Norris et al., 2002). Therefore, the results revealed that a traumatic event is a necessity for PTSD to occur, but it is not sufficient (Shalev, 2007). Although these events are prevalent, and likely to cause distress, however, only a minority of individuals develop PTSD. Therefore, every individual may perceive, appraise and respond to the same traumatic event differently. For this aim, two main analyses were conducted. In the first one analysis, after controlling the effects of sociodemographic factors, personality traits, event related variables such as type of events, duration of symptoms, time elapsed since trauma, total impairment of functioning, and as posttrauma factors perceived social support, event-related ruminations, ways of coping were examined in relation to posttraumatic symptom severity and posttraumatic growth scores. In the second analysis, pretrauma factors measured by personality traits, peritrauma factor measured by event-severity, and posttrauma factors measured by perceived social support, event-related ruminations, ways of coping were examined via a comprehensive model in order to examine the underlying pathways to posttraumatic symptom severity and posttraumatic growth scores. The results of these two main analyses will be discussed in the following sections, namely Posttraumatic stress symptom severity and Posttraumatic Growth.

4.3 Posttraumatic Stress Symptom Severity

Posttraumatic Stress Symptom Severity is a total score of three main symptom clusters of Posttraumatic Stress Disorder, i.e., reexperiencing, avoidance, arousal. Rather than only focusing on the factors of a probable PTSD diagnosis, more detailed further analyses were preferred in order to deepen our understanding of variables affecting the consequences of traumatic events. First of all, the symptoms of posttraumatic stress disorder were examined in order to evaluate whether different types of events lead to differential symptoms. Immediate or short-term after the trauma, it is difficult to distinguish the symptoms of PTSD from normal reactions given to a trauma (McFarlane & Yehuda, 1996; cited in van der Kolk et al.,2007). In the early period following any traumatic/adverse event, intrusions in the form of “as

if reexperiencing" the event, via images and recursive thoughts are expected (Foa et al., 1989). However, if symptoms continue with increasing intensity, then this would be evaluated as leading to more permanent changes. Depending on type of the events, some people may avoid to process the traumatic material, and avoid to confront places, people, or thoughts related to the event. Moreover, arousal symptoms may lead individuals to experience disturbances such as nightmares, sleeping and concentration difficulties, impairment in daily life functioning (Foa & Rothbaum, 1998). In the current study, the results of comparing types of events and symptoms of PTSD indicated that those who reported other-life transition group of events and intentional/assaultive violence type of events, experienced significantly higher symptoms of avoidance. This finding indicated that in the aftermath of such events like divorce, or work-place problems as compared to sudden death and injury/shocking event, participants showed more avoidance symptoms. Arousal symptoms were experienced mostly by people who were exposed to intentional/assaultive violence type of events, implying that experiencing a sexual or non-sexual assault leads to significantly higher arousal symptoms such as sleep disturbances, nightmares, concentration problems, irritability. As a result, when overall symptoms were compared across the types of events, differences across the types of events pointed to different posttraumatic symptoms (H4 was supported). Thus, the type of events experienced seems to determine the type of traumatic consequences.

Sociodemographic Variables associated with symptom severity

With these results in mind, variables associated with overall symptom severity was examined via regression analysis. Among sociodemographic variables, only age and gender were found to be associated with symptom severity, implying that being young and being female predicted higher levels of symptom severity following traumatic events. Although there was no significant difference between females' and males' scores in qualifying for a probable PTSD, the findings revealed that gender mattered in determining severity of symptoms. Since these symptoms were more severely expressed by females, males may either react and process the stressful or traumatic events differently, or this may be a result of underreporting of the symptoms by males. Another view may be an expectation of gender roles of

males being stronger and not effected by such events. Another suggestion claimed that since women seemed to be more aware of themselves, they may perceive and report the changes more easily (Merecz et al., 2012). Being young and having lower income were also found to be associated with both probable PTSD and symptom severity. One explanation was proposed to be that younger people may be effected more by negative life events because of their views of the world as less controllable and less caring (Calhoun, Cann, Tedeschi, & McMillan, 1998), thus perception of social support and available resources to cope may be impaired. Another possibility of differences in gender and age may be due to males than females, older than younger to perceive less threat and a sense of danger during the event (Meyerson et al., 2011). Those who evaluate their actions during the event negatively, may overgeneralize the situation to one's resources and increase negative beliefs about self and others (Foa et al., 1989). When individuals believe that they are unable to cope with trauma, then this belief may increase the avoidance symptoms (Foa & Rothbaum, 1998), which in turn inhibits the processing of traumatic material.

Pretrauma factors associated with symptom severity

In this study, among personality factors, neuroticism was found to be the personality trait associated with higher symptom severity (H5 was supported). Extraversion, indeed was negatively associated to symptom severity, i.e., introversion predicted higher symptom severity until intrusive rumination entered in the regression equation, meaning that although intrusive rumination and introversion shared some variance in explaining symptom severity, intrusive rumination had more significant contribution to explain the variance. The results of indirect effect of personality to symptom severity via rumination will be later discussed in model testing section. This finding was in agreement with the literature findings, that neuroticism on its own or in combination with introversion was associated with the severity of posttraumatic stress and PTSD symptoms (Ai et al., 2005; Evers et al., 2001; Val & Linley, 2006; Emmelkamp, 2006). It was indicated that those with higher neuroticism (as compared to extraversion, conscientiousness) effected by the event more in respect to higher severity perception during the event (Löckenhoff et al., 2009). This relationship between neuroticism and reported event-severity will be discussed later in this section, while presenting the results of model testing.

Event-related Variables associated with symptom severity

Event-related factors (i.e., type of the event, time elapsed since trauma, duration of symptoms, total impairment of functioning) were the next variable group that was studied widely. All variables entered in the regression analysis were found to be associated with symptom severity. Increased impairment of functioning (i.e., social-marital-academic-work life, relationships with partner, friends, colleagues) and longer duration of symptoms were related to higher symptom severity. These results supported the research hypothesis (H5) that event-related factors will be significantly related to symptom severity, which was also regarded as an expected finding, with respect to previous research results (Karancı et al., 2012). One finding suggested that when the stress symptoms continue, the functionality is impaired (Mulder, Fergusson, & Horwood, 2013) and severity perception is maintained. Furthermore, the longer the PTSD lasts, the role of event in explaining the symptoms becomes less important. So passage of time since the traumatic event is another factor determining the differential consequences. In the present study, time elapsed since trauma was negatively related to symptom severity, indicating that longer passage of time since trauma lessens the severity of symptoms. Contradictory previous findings, could not end up with clear conclusions about the effects of time in the severity of symptoms. According to longitudinal research results, a decline in PTSD symptoms was found following rape (Foa & Rothbaum, 1989), and violent crime accidents (Rothbaum et al., 1992). The current study showed that intentional/assaultive violence group of events as compared to sudden death were positively related to symptom severity. However, since the current study was not a longitudinal study, a conclusion about the effects of time in the aftermath of different types of events could not be clearly provided. The focus of the current research was more on other variables such as individual resources and posttrauma processing rather than time. Therefore, besides just considering the time passed since trauma, other factors such as duration of symptoms and the processing carried out during that period seems to be a more essential factor in determining the outcome. However, an important view that must be kept in mind, stated by Tedeschi & Calhoun (2004) is that time is necessary to cope effectively and to find meaning out of the event.

Post-trauma Factors associated with symptom severity

One reason that intentional/assaultive violence group of events increased symptom severity, might be related to the nature of event which accompanies difficulties of engaging in adaptive coping strategies and finding meaning. Likewise, interpreting the event and intrusive memories in a negative way by ruminating, suppressing, or avoiding, may cause maintenance of symptoms (Mayou et al., 2002). At this stage, the resources and capacity of the individual in dealing with the intrusive memories of event (rather than the event itself) becomes important. Eventhough the event has passed and the danger or threat is no longer there, the mental processes may contribute to the continuation of overwhelming the individual (Freddy et al., 1992). The present study findings supported this view, in that intrusive rumination, deliberate rumination and fatalistic coping were all significant associates of symptom severity. This indicated that rumination no matter whether it is intrusive or deliberate may increase symptom severity (H5 was partially supported). The effect of deliberate rumination on symptom severity will be discussed in the next section together with its effect on PTG.

Fatalistic coping, which was one of the emotion-focused coping strategies, was found to be related more with symptom severity (H7 was supported). It was claimed that some people in the process of making sense out of adversity, rely on religion or spiritual life, especially those living in a fatalistic society (Splevins, Cohen, Bowley, & Joseph, 2010). Therefore the individual via religious coping is claimed to respond with acceptance rather than problem-solving approaches (Pargament, 1997; Pande, 1968). Religious coping is suggested to entail two sides; both negative and positive. On one hand, in positive religious coping, without any questioning a trusty and secure relationship is established with God, where problems are handled with the help of God via acceptance, forgiving, letting-go. On the other hand, negative religious coping involves insecure, untrusty relationship with God, where stressful events are interpreted as a punishment of God. The finding of this present study, may be more related with the negative religious coping where the appraisals might involve thoughts of injustice, feelings of anger to God, difficulties in finding meaning out of the traumatic events (Pargament et al., 1998), thus increase severity of symptoms.

4.4 Posttraumatic Growth

Since 1980s, research was conducted more on the negative outcomes of exposure to traumatic events. However, there is an increasing change in the perspective that people may also develop or change in a positive way in the aftermath of traumatic events (Paton, 2006). These positive changes that lead to growth are suggested to be summarized in five domains as finding new possibilities, spiritual change, relating to others, personal strength, and appreciation of life (Tedeschi & Calhoun, 1996). In the aftermath of adverse events, the individual may find new opportunities in life that were unrecognizable before trauma. When people realize they can cope with the adverse event, they may also become more self-reliant, their beliefs in themselves may improve and they may feel stronger. Further, individuals may improve their social relations and interactions with others, also may become aware of the support around them. These individuals may become more sensitive to others with similar pain, and they may get connected and disclose their experiences more. The experience of a traumatic event may change the individuals' value system in that they may value life, people, God more and appreciate every day for living. So with this viewpoint, a considerable number of researchers focused their studies on finding out the possible contributing factors to growth following adverse life events (Armeli et al., 2001; Tedeschi & Calhoun, 2003).

The purpose of this study, in parallel with these research interests, was to focus on the contributory roles of variables on growth and to understand the underlying mechanisms of traumatic events facilitating growth. First of all, the relationship between five domains of posttraumatic growth and event-types was analyzed. Previous findings showed that intentional/assaultive type of events such as sexual assault may hinder trust in others and damage interpersonal relations, thus lead to develop no or low levels of growth (Shakespeare-Finch & Armstrong, 2010) and relating to others domain, in particular. Additionally, since these events are intentionally caused rather than 'naturally occuring', if the individual appraise the event as controllable or preventable, then feelings of shame and guilt accompanying self-blame will be increased, which will in turn inhibit the growth domain of personal strength (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001). However, if the individual externalizes the events to spiritual themes like God

and interprets them as uncontrollable, this may lead to more positive outcomes. Further, death-related events (i.e., unexpected death, life-threathing illnesses) or thoughts about such events are proposed to result in an increased appreciation of life (Davis & McKearney, 2003). The results of the present study in respect to the effects of different event-types on five domains of PTG, showed a significant difference only on appreciation of life domain. More appreciation of life was reported in the aftermath of injury/shocking type of events (e.g., life-threatening illness, natural disasters, accidents), as compared to intentional/assaultive violence type of events and other group of events (e.g., divorce, financial problems) (H6 was partially supported). This finding is similar to previous finding proposing a death-related theme increasing appreciation of life domain. However, although mean score of this domain was high following sudden death type of event, it was not significantly different across various event-types. This may entail a factor that is related with the appraisal of death in society. Since this study was conducted in a mostly Muslim community sample, death may be a theme more related to fatalism, and lead to engage in more emotion-focused coping (Kastenmüller, Greitemeyer, Epp, Frey, & Fischer, 2012). Thus, the individual may approach sudden death with negative religious coping, where negative thoughts and feelings to God may be activated, which in turn diminish growth levels in total. Another perspective claimed by Karanci et al., (2012), seems to be also valid for our study, is that following a sudden death, an individual may struggle with the feelings of guilt (of surviving, and/or enjoying life without her/him), thus growth may be considered as another area of guilt, yet perceived as negative, and not developed in the individual.

Sociodemographic Variables associated with posttraumatic growth

Following examining the impact of event-types on different domains of PTG, the variables that facilitate growth in the aftermath of trauma were analyzed. Among sociodemographic factors, age and education level were found to be negatively associated to PTG, indicating young age and low education level (Karanci et al., 2009) have higher association with the development of PTG (H7 was supported). This finding between young age and PTG was supported (Merecz et al., 2012; Sawyer et al., 2010), in previous research results. Most of the explanation converged on the possible explanation that young people in the aftermath of trauma can be more

adaptable than older people. This may be because core beliefs of younger people are more likely to be challenged and potentially more changeable, whereas older's core beliefs are more resistant to change (Calhoun, Cann, Tedeschi, &McMillan, 1998). Similarly, since growth in longer periods of time leads to an identity transformation where basic assumptions about the self, others and world are challenged (Janoff-Bulman, 1992; Perez-Sales, 2006), younger people may have more time for that transformation to take place. Another explanation suggested that since older people, as compared to younger ones, generally expected to be more agreeable, conscientious and emotionally stable (Roberts & Mroczek, 2008), positive changes may be less evident. Indeed, younger age was also a significant factor related to higher symptom severity. As discussed above, young age rather than by its own, when combined with other factors such as the repertoire of the coping skills, mental processes, resources (social support, personality), may change consequences.

Pretrauma Factors associated with posttraumatic growth

Personality is among the pretrauma factors, which has been studied widely in the trauma literature. The hypothesis (H7) that conscientiousness, agreeableness, and openness to experience will increase developing PTG was partially supported, because in the regression model, only conscientiousness was found to remain positively related to PTG. However, the remaining two personality traits were (i.e., openness to experience and agreeableness) also significant until the entrance of problem solving coping in the regression equation. Therefore, problem-solving coping style and these two personality traits share similar skills i.e., related with each other that explain the variance on PTG. Previous findings also emphasized the necessity to examine the mediating role of coping between personality and PTG (Karanci et al., 2012). Some studies claimed that conscientiousness is related with PTG (Tedeschi & Calhoun, 1996; Shakespeare-Finch, 2005; Garnefski et al., 2008; Karanci et al., 2012) because of being more disciplined, ambitious for achieving the goals (Costa & McCrae, 1992), and directly approaching the problem rather than avoiding it (Connor-Smith & Flachsbart, 2007). So the results of the present study supported these views about the association between conscientiousness and PTG. Taken together with the results of the regression analysis, since both openness to experience and agreeableness remained positively associated with PTG until

problem-solving coping was entered into the equation, it can be inferred that these personality traits share the same features in explaining growth following traumatic events. Likewise, the relation between extraversion and seeking social support coping can be regarded as sharing a common feature of the personality dimension. The possible mediating role of active ways of coping (i.e., problem-solving coping and seeking support coping) between personality traits and PTG was examined via indirect effects on model testing. Therefore, the results will be discussed in model testing section.

Event-Related Factors associated with posttraumatic growth

In regard to event-related factors, type of event (i.e., injury or shocking event type versus sudden death) and duration of symptoms were two variables leading to higher growth. Many studies revealed that PTG and positive changes occur in the aftermath of various event-types. Some researchers made a distinction about the type of event as 'naturally' occurring events such as death and disasters lead to develop more growth than 'human-caused' events such as violence and assaults (Shakespeare-Finch & Armstrong, 2010; Ickovics et al., 2006). However, there are other studies that found no relationship between the type of event and growth (Aldwin et al., 1996; Park et al., 1996), concluding that independent of the type of event, PTG is suggested to be the result of the struggle with the event (Tedeschi & Calhoun, 1995). The finding in the present study, supported the view as relatively 'naturally' occuring events such as life-threatening illness, disasters as compared to sudden death, was leading to higher growth. On the one hand, these injury-shocking events may be more commonly experienced and accepted, therefore the individual by using positive religious coping via externalizing the responsibility to God, may develop PTG. On the other hand, sudden death may entail themes related to negative religious coping (as discussed above) such as feelings of guilt, cognitions of regret (e.g., 'I should have spent more time with him/her) and mostly anger to God for injustice of 'separating the beloved apart'. Hence, for such issues more qualitative in-depth analysis are necessary to provide richer data. Another finding in this study, showed the relation of duration of symptoms and growth. It is claimed that longer duration of symptoms, leads individuals to re-evaluate the situation in order to understand, adapt, and make meaning out of the experience by cognitive processes.

These re-evaluations as proposed by Evers et al., (2001) may involve; (1) cognitions focusing on negative sides of stressor and feel helplessness or hopelessness, (2) cognitions about reducing the negative meaning or impacts of the events by accepting and learning to live with it, (3) cognitions focusing on adding positive meanings to the experienced event. Since longer duration of symptoms were related both with symptom severity and PTG, the content of divergent re-evaluations i.e., cognitive processing may be responsible for these negative versus positive consequences.

Post-trauma factors associated with posttraumatic growth

Besides these factors, post-trauma processing becomes an essential area to explore how they impact PTG. The results of the present study indicated the positive association between engaging in deliberate rumination, problem-solving coping, and seeking support coping and developing higher growth (H7 was supported). To start with deliberate rumination, its significant association with growth was shown by a variety of studies. One assumption is that deliberate rumination helps the individual to manage the traumatic event by reducing the effects of emotional disturbances (Tedeschi & Calhoun, 1995; 2004), to find out ways of coping, and lead to evaluate one's resources as sufficient (Calhoun & Tedeschi, 2006). Since deliberate rumination is a voluntary and intentional process in trying to cope with or handle the suffering from extremely challenging life events (Calhoun & Tedeschi, 2006), it is important that this process leads the individual to use adaptive coping strategies and to benefit from the event (Affleck & Tennen, 1996; Taku et al., 2008). If this is accomplished then growth will be developed (Cann et al., 2011).

According to the results of the current study, two adaptive ways of coping, namely problem-solving coping and seeking support coping were found to be related with higher growth. Both ways of coping involve active search for a solution. Problem-focused coping includes purposeful efforts to solve directly the problem, or attempting to alter a situation (Billings & Moos, 1981; Folkman & Lazarus, 1985; Moos & Schaefer, 1993), while seeking support coping is more likely to approach stressful situations by obtaining advice, seeking accompany or expressing emotions (Carver et al., 1989; Litman, 2006). It is suggested by Park (2004) that positive coping helps the individual make meaning, facilitate struggling, and become aware

of positive outcomes, thus grow. Therefore in light of these findings, the result of the present study implying two mentioned coping styles as facilitators of PTG, is not surprising.

Finally, perceived social support in the aftermath of an adverse event has been shown as one of the important factors for developing PTG. Every individual is part of a social network, and social support can be evaluated as interactions that provide individuals support with caring and loving relationships when needed (Kaniasty, 2005). The perceived social support which is a dimension measured in this study, can be referred as the perception of the individual about the availability of support from this network (family, friend, significant other) in required situations. Social support can be regarded as a factor helping to recover from trauma by influencing the type of coping style utilized (O'Brien & DeLongis, 1997) where active support may influence efforts to manage the situation more easily. Social support is suggested to improve controllability perception over the situation and self-confidence, which in turn helps to appraise the event more positively and increase the selection of active coping strategies (Schaefer & Moos, 1998). When social support networks provide the opportunity to express emotions, discuss concerns, challenge negative beliefs and thus reduce the rates of engaging in avoidance coping strategies (Flannery, 1990; Folkman & Lazarus, 1990), then engaging in active coping increases. However, it is important to keep in mind that being exposed to a traumatic event, may distort the cognitions and perceptions of the individual, thus may lead to perceive others and their relationships as less supportive (Stroud, 1999). According to the results of the present study, perceived social support from friend and significant other were found to be significantly related with PTG. Interestingly, perceived support from family was not a significant factor leading to PTG. This may be due to the confusion of the distinction between family and significant other. Especially, if the individual is married, family concept becomes mixed; some consider family as 'father, mother, sister, brother', while others as 'wife, husband, children'. Another suggestion is that, following traumatic events, people may not prefer or feel comfortable in disclosing to family, either because they believe their families cannot help them, or they may be unwilling to make them upset or distressed, or maybe they regard support from family a guaranteed act.

The findings of the current study, showed the need for further analysis to examine the indirect effects of event-related rumination, ways of coping and perceived support on symptom severity and growth.

4.5 Model Testing

Together with these conclusions in mind, underlying paths were tested via a comprehensive model. Since the model provides pathways to make comparisons for both ends (negative and positive) simultaneously, the results of associated variables with both outcomes, namely symptom severity and posttraumatic growth will be discussed together in this section.

The model was composed of eight predictor variables, namely neuroticism, other-personality, event-related severity, perceived social support, intrusive rumination, deliberate rumination, active coping, emotion-focused coping and two outcome variables namely, Posttraumatic Symptom Severity, Posttraumatic Growth.

The personality trait of neuroticism, which is a widely studied trait and mostly found to be associated with posttraumatic stress symptoms, is characterized by emotional instability, behavioral inconsistency, enhanced physiological arousal (McCrae & John, 1992), that mostly engage in maladaptive cognitive processing (such as wishful thinking) and immature coping strategies (Connor-Smith, & Flachsbart, 2007). In the current study, neuroticism revealed three direct effects, implying that following traumas, higher levels of neuroticism significantly predicts perceiving the event as more severe, engaging in more intrusive rumination, and more emotion-focused ways of coping (H8 was supported). These relations can be regarded as a confirmation of previous literature results.

Previous studies suggested that neuroticism (rather than extraversion and conscientiousness) leads individuals to perceive an event as more traumatic (Merecz et al., 2012; Löckenhoff et al., 2009). One explanation is that negative interpretations of heightened danger and feelings of helplessness are related features of neuroticism. Hence, those with neuroticism have difficulty regulating their emotions and have tendency to overgeneralize/exaggerate the threat. Therefore, the finding that neuroticism leads to greater reported event-severity, is not unexpected.

Rumination is regarded as maladaptive when abstract questions of ‘why?’, ‘why me?’, ‘what if?’ are asked repetitively. This compulsory-like questioning

causes to focus on the negative consequences of the event without helping the individual to concrete solutions (Watkins, 2008). This type of rumination (i.e., intrusive) also has been shown to elevate the negative emotions associated with the traumatic event and impede the problem-solving processes, thus impair functionality and lead to further distress (Nolen-Hoeksema & Morrow, 1991). During intrusive rumination, the individual finds oneself automatically thinking about the event, which in turn increases the possibility to reexperience (a PTSD symptom) the event-related issues. If the individual interprets intrusive rumination as negatively, then threat perception with negative emotionality is claimed to be maintained (Ehlers & Clark, 2000). Hence, the positive association between both neuroticism and rumination, and neuroticism and maladaptive coping has been revealed by a variety of studies (Segerstrom et al., 2003). A stressful event itself or perceiving the event as traumatic may impair the basic skills of individuals. When the individual feels overwhelmed by the trauma with increasing uncontrollability perception and feelings of helplessness, coping abilities of the individual may be impaired. Furthermore, in case of neuroticism, research in a community sample, showed that it is related with coping strategies involving avoidance, self-blame and withdrawal. This was supported by the results of the present study, indicating that neuroticism leads individuals to engage in more emotion-focused ways of coping (helplessness coping and fatalistic coping). Since the ability to manage stress is diminished, those with neuroticism become more prone to heightened symptom severity (Costa & McCrae, 1992).

According to the cognitive model of PTSD, trauma severity, and related threat perception has an important role in the development or maintenance of PTSD (Horowitz, 1986; Foa et al., 1989; Ehlers & Clark, 2000) via cognitive and behavioral coping strategies (Olff, Langeland, Berthold, 2005). The same path was found to be significant in the present study, and supported that the indirect effect of reported event-severity on posttraumatic symptom severity increased via intrusive rumination and emotion-focused coping strategies. Ehlers and Clark (2000) proposed that rumination effects PTSD symptoms in three ways: i.e., rumination (1) prevents the individual to process trauma-related issues, (2) increases the negative interpretations of trauma and its consequences, (3) may activate arousal-like

symptoms (tension, hopelessness) and trigger intrusive memories. When these negative effects of rumination are left unprocessed, successful problem solving is impeded, thus stress symptoms are maintained (Nolen-Hoeksema & Morrow, 1993). Besides, some people actively avoid thinking about the event and inhibit negative-emotions, believing that this would further damage oneself. However, if the individual avoids, suppresses, or tries not to think, feel or not to ruminate about the traumatic event, then the individual becomes more involved with the cognitive process of thinking more about it (Gold & Wegner, 1995). However, it is claimed that intrusive rumination helps individual to search and find a meaning about the event, and predicts deliberate rumination (Tedeschi & Calhoun, 2004; Cann et al., 2011). This predictive role of intrusive rumination on deliberate rumination is supported (H13) in the present study. Though, Tedeschi and Calhoun (2004), claimed that in order for cognitive processing to promote growth, effort and time is needed. However, how types of rumination change over time cannot be studied in the present study. This may be one reason of intrusive rumination via deliberate rumination leading to higher symptom severity. Since deliberate rumination involves questions such as ‘‘Could I make meaning from my experience?’’, ‘‘What does this mean for my future?’’ and ‘‘How does this effect my view of the world?’’, time may be needed to find adaptive answers. Anyhow, the contribution of deliberate rumination to facilitate recognizing beneficial sides of traumatic events were studied in the present study and evidence has been provided (Vishnevsky et al., 2010; Chan, Ho, Tedeschi and Leung, 2011).

In respect to personality and rumination, some researchers mentioned, that a major life event can temporarily activate both the intrusive and deliberate thinking, independent of one’s stable characteristic (Taku, Cann, Tedeschi, & Calhoun, 2009). Meanwhile in other studies, a positive correlation was found both between neuroticism and negative repetitive thought, and openness to experience and searching more for repetitive thought (Segerstrom et al., 2003). However, the results of the present study supported previous findings that a traumatic event activates both intrusive and deliberate rumination styles (H10 was supported), and while neuroticism directly triggers intrusive styles of rumination (H8 was supported), other personality traits enhances engaging in deliberate rumination (H9 was supported).

Some studies suggested that although neuroticism (rather than extraversion and conscientiousness) leads individuals to perceive an event as more traumatic (Merecz et al., 2012; Löckenhoff et al., 2009), they may have the necessary personal resources to cope with those events, thus may increase the possibility to develop PTG (Merecz et al., 2012). Likewise, according to emotional processing theory (Foa & Kozak, 1986), when the individual feels him/herself in danger, or perceive threat, (e.g., greater perceived event-severity), a fear structure activates adaptive behavior. Another study (Charlton & Thompson, 1996) reported neuroticism as associated with both emotion-focused and unexpectedly more problem-focused coping. In the present study there have been a chance to test this suggestion, and the results gave way to confirm such a significant indirect effect of neuroticism on PTG via deliberate rumination and/or active ways of coping. This was considered as an important contribution in understanding this relationship. It may be suggested that since neuroticism increases levels of reported event-severity and intrusive rumination, these may be related to the concept of Tedeschi and Calhoun's seismic event, where just like earthquakes shake buildings, traumatic events shake the individuals' assumptive world, which in turn leads the individual to process the necessary work. So, the higher the perceived threat, the greater disruption to one's assumptive world, which in turn, also increases levels of PTG (Calhoun & Tedeschi, 2006). However, in trying to gain insight and make meaning out of this disruption, individuals are claimed to get involved in the event deliberately by cognitive and behavioral processes.

On the other hand, the indirect effect of other personality traits (rather than neuroticism) on symptom severity either via deliberate rumination and/or active coping was not significant (H15 was partially supported). For those with other personality traits, using deliberate rumination do not lead to an increase in symptom severity, rather lead to an increase in levels of PTG. In other words, deliberate rumination has a positive impact on those with other personality traits (those with higher extraversion, openness to experience, agreeableness, conscientiousness or lower negative valence). However, other personality traits, even through engages in active coping strategies (such as problem-focused coping, seeking support coping), do not have the sufficient power to diminish the severity levels of posttraumatic

stress symptoms, but as hypothesized, via active ways of coping, can foster higher levels of growth (H16 was supported).

Furthermore, the results of the current study showed that perceived social support in the aftermath of trauma promotes active coping, which in turn increases levels of PTG (H12 was supported). Although previous results indicated that agreeableness leads to perceiving others and social relations as more supportive (John & Srivastava, 1999; Wehrli, 2008), the hypothesis that those with other personality traits (than neuroticism) including agreeableness, would perceive higher social support (H9 was partially supported) was not supported in this study. Previous study findings showed some evidence that social support following traumatic events influences both appraisals and coping abilities (Parkinson, 2000). Especially, in collectivist cultures, people have the opportunity to benefit from environment (extended family members, friends, neighbours) following a trauma, where event-related cognitions and feelings can be disclosed and processed. In the aftermath of specific event-types, satisfying the needs for safety, stability, security, empathy and respect becomes increasingly essential (Price, 2007). When people seek for such support following traumas, these needs should be met in particular. Hence, it can be inferred that the match between perceived social support and seeking support coping (demand for support, advice, accompany) is important in fostering positive changes, while reducing the negative outcomes (Carver et al., 1989; Litman, 2006). However, one point should be kept in mind that individuals exposed to a traumatic event, may start to perceive their relationships as less supportive (Stroud, 1999).

Meanwhile, other-personality factors such as extraversion were found to be highly associated with more active ways of coping (McCrae & Costa, 1986), which in turn fosters PTG (H22 was supported). Aldwin et al. (1996) found that coping strategies mediated the relationship between trauma and both positive and negative outcomes. Similarly, a follow-up study and a longitudinal study found that dealing with a traumatic event by using problem-focused coping were related with positive outcomes, whereas those using avoidance and emotion-focused coping were negatively related to experiencing positive outcomes (Aldwin et al.,1996; Moos & Schaefer, 1993; Mason et al., 2006). Coping strategies were also found to be related with the controllability appraisals, in that if the event is appraised as controllable and

changeable via deliberate rumination, problem-focused coping will be engaged. This in turn, provide increased controllability, less distress, more hope and higher levels of PTG (Janoff-Bulman, 1979). The cognitive appraisal theory (Lazarus & Folkman, 1984), is presumed to fit this explanation in that there are two stages of responding to stressful life events, namely 'primary appraisal' and 'secondary appraisal'. The primary appraisal stage, where first impression about the situation is formed as harmful, threatening or challenging, seems to be similar to peritrauma severity perception. This appraisal is influenced by situational features (in other words, event-related factors) such as the nature of stressor, degree of familiarity, timing, context, and thoughts about possible impacts afterwards. Additionally, the evaluation is also influenced by psychosocial features of the individual such as values, motivations, roles, personality traits, religious beliefs (pretrauma factors). The secondary appraisals are influenced by the individual's available resources to cope. This covers individuals' engagement in cognitive processing (i.e., attribution of responsibility and controllability, thus rumination), in which these evaluations lead individuals to determine the ways of coping with the stressor (Lazarus & Folkman, 1984). In deciding to cope with the stressor, the individual uses both psychological (problem solving skills, meaning making capacity) and social resources (social support). If the individuals assess the resources as sufficient to mitigate the effects of the event and then adaptive ways of coping are utilized. For those who appraise the situation and resources as insufficient, and become hopeless towards a potential change (Billings & Moos, 1981; Folkman & Lazarus, 1985; Moos & Schaefer, 1993), then the individual engages in emotion-focused coping. The findings are clear in showing that emotional coping leads to poorer outcomes (Brantley et al., 2002). Although pathways were not clear (Huijts et al., 2012), previous findings indicated that traumatic events may decrease individual's ability to cope with the stressors, and lead to an increase in using maladaptive coping strategies (Emmelkamp et al., 2002). This result of the current study provided a pathway as, following traumatic events those who perceive event as more severe and engage in more intrusive rumination, uses greater emotion-focused ways of coping. In this study one of the emotion-focused coping strategy is religious or fatalistic coping, where individuals cope with emotional strategies and externalize adverse situations to spiritual themes like God.

Following traumatic events, survivors are left with a number of unanswered and complex questions with no easy answers (Boehnlein, 2007). The questions involve issues related to human existence such as meaning of life, meaning of loss, the good–the evil, and moral issues of existential justice. Questions such as 'Why did this happen to me?', 'Did I do something to cause this?', 'Is this a punishment by God?', 'Is life worth living?', Why live more, I have no purpose?' are frequently searched for answers. The results of the present study from a predominantly Muslim sample, revealed that if the individual can accomplish to provide answers through deliberately ruminating, this may lead individuals to have a chance of developing PTG. Since deliberate rumination was conceptualized as more purposeful effort in questioning, finding benefit and meaning out of the event (Janoff-Bulman, 2004; Tedeschi & Calhoun, 2004), it was hypothesized to be more related to posttraumatic growth. When people encounter with an adverse event, it is proposed that individuals initially engage in intrusive rumination rather than deliberate (Calhoun & Tedeschi, 2006).

However, another finding of the present study is that deliberate rumination provokes symptom severity. This is assumed to be so, if the individual cannot accomplish to cope effectively with the traumatic material (for example, cannot engage in ways of active coping) after deliberate rumination. Although deliberate rumination facilitates the individual to process the event and guides to find some benefits, the individual may "get stuck" (Michael & Synder, 2005) at this stage. Therefore, it is proposed that if deliberate rumination coexists with intrusive rumination then this would lead to distress rather than growth. Then, the finding in this study may imply that if the individual is overwhelmed with these efforts in finding benefit or seeking-meaning, and cannot move forward, these attempts may increase the severity of symptoms and impede adaptive processing. In other words, as provided evidence in a study (Stockton et al., 2011) that both intrusive and deliberate rumination are positively correlated with intrusion symptoms of PTSD, in particular. If the individual perceives the event as 'unfinished business' (Beike & Wirth-Beaumont, 2005), then the attempts for searching meaning would result in maladaptive ways of coping. According to Tedeschi and Calhoun (1995; 2004), individuals may process the event repetitively in order to deal with the disparity of

the preexisting schemas and present situation. If the rumination cannot facilitate the integration of preexisting beliefs with the current trauma, then this would increase the feelings of helplessness, engaging in avoidance and emotion-focused coping strategies (Horowitz, 1986). It would not be so wrong to conclude from the results of this study, that after cognitive processing, the individual should engage in some form of actions (Hobfoll et al., 2007) via adaptive coping strategies in order to reach positive consequences following a traumatic experience. Furthermore, it will be interesting to explore the content of deliberate ruminations in future qualitative studies.

As a result of all the significant pathways, almost half of the variance on both Symptom Severity (52%) and PTG (45%) was explained by the model. Furthermore, 47% of the variance on deliberate rumination and 63% of the variance on active coping was explained by the model. These results yielded that this model is sufficient to explain half of the variability on symptom severity and PTG in this sample.

Association Between Posttraumatic Stress Symptom Severity and Posttraumatic Growth

The relationship has been actively searched by researchers in order to understand the mechanism between posttraumatic stress and growth (Hobfoll et al., 2006; Helgeson et al., 2006). However, no consensus has been reached about the relationship between PTSD and PTG. It is more commonly claimed that PTG can be developed more, only if the event is qualified as a traumatic event. In other words, rather than objective severity, subjective perception of severity of event (i.e., as traumatic) and personality traits have been claimed to contribute to the development of PTG (Merecz et al, 2012). The view, that even some dangerous event can lead or produce an opportunity, is depicted in Chinese symbol for crisis which combines danger and opportunity. The negative life experiences may evoke some efforts in individual to regain balance in their life (Cadell et al., 2003), thus may be a forerunner of improvements, change and growth in life (Heatherton & Nichols, 1994).

Tedeschi and Calhoun, (2004) in their model regards posttraumatic growth as a process and outcome of ‘grief work’. They pointed out that in order to accept the loss and emotions following traumatic events, a period of time is needed to process

the event mentally, thus develop PTG. However, intensity of stress symptoms or distress do not have to be decreased but moderately maintained in order for growth to take place. Hence, some manageable level of distress contributes to PTG. In this model, deliberate rumination in particular, is claimed to have a motivator role on PTG via decreasing the emotional distress caused by the traumatic event and schema breakdown.

In the current study, this relationship was estimated in a simpler model via SEM. Although a positive association was proposed between symptom severity and PTG, in the model a negative association was observed. The results revealed a negative relationship between symptom severity and posttraumatic growth (H23 was not supported), implying that as symptom severity diminishes, higher levels of PTG is developed. However, this might be related to the time of the research study, i.e., time elapsed since trauma. one explanation can be that, immediately after the traumatic event, people may exhibit both PTSD symptoms and PTG. This coexistence might be altered over time with a decrease in posttraumatic stress symptom severity. The regression analysis results of the present study also showed that over time posttraumatic symptom severity decreases. However, longitudinal studies are needed focusing on the relative changes of the relationship between PTG and distress over time.

This model also indicated that higher levels of event-severity, increased levels of engaging in both intrusive and deliberate rumination. Those who reported greater event severity, via intrusive rumination, they may experience greater symptom severity, which in turn decreases growth levels. However, if intrusive rumination leads to deliberate rumination, then the individual may develop PTG even when they perceived high event-severity. In short, in order to foster PTG, symptom severity should be decreased, but as proposed by Tedeschi & Calhoun (2004) to moderate/ manageable levels. To conclude, referring back to the literature section of this study (pp. 2), declaring that when the physical trauma exceeds the capacity of body to repair, lasting damages or even death may occur and if the trauma is too severe for the body, then physical functioning may be lost. Likewise, a damage to one's nervous system may result in an impairment of behavioral, psychological or intellectual functioning, and severe stressors cause a breakdown in the integrity of

both the body and the mind (Kirmayer et al., 2007). Similary, if the traumatic event is seriously severe for the integrity, damage to psychic world may be overwhelming. However, if the event is severe enough, a psychic wound may remind the individual about the event and may lead to adaptive processing (deliberate rumination and active coping) over time. Indeed, for further conclusions about the relative changes over time, between the relationship of PTG and stress symptom severity, future longitudinal studies are compulsory.

4.6 Strengths and Limitations of the Present Study

Many studies on the prevalence of PTSD have been implemented around the world, however there have been relatively few studies in Turkey on the prevalence of experiencing different kinds of traumatic events, and how they relate to rates of probable PTSD. The previous studies have mostly focused on the consequences of special populations (e.g., survivors of earthquakes, cancer, accidents) or specific types of events (e.g., illness, bereavement), however a range of different types of traumatic events with both negative and positive consequences were not widely studied within the same samples. Karanci et al., (2009) examined the prevalence rates of various types of traumatic events and probable PTSD, and PTG levels (Karanci et al., 2012) in a representative community sample of adults from 3 provinces of Turkey, where sociodemographic variables (age, gender, etc.) and personality characteristics of the participants were analyzed as possible predictors of PTSD and PTG. The current study provides an additional research study focusing on prevalence rates of different types of traumatic events, probable PTSD and PTG from a different province of Turkey and also enriches the variables that may be related to these outcomes by including cognitive variables (intrusions) and coping strategies.

The study was conducted in a representative community sample, thus the sample is composed of a heterogeneous group of adult participants who were not exposed to just a particular event, rather they chose among a list of various event types or they indicated another event type which was not on the list. By this way, prevalence rates of experiencing different types of traumatic events and their possible relations with probable PTSD is provided from a non-clinical sample.

This study provides the opportunity to examine the impact of trauma related factors together with more individual-specific psychological factors on the PTS

severity and PTG. Previous research have consensus on that, besides the traumatic event itself, the individual's processing style has influences on the outcomes at the end (Aldwin, 1996). Therefore, the present study examined the effects of types of event together with sociodemographic characteristics, personality, perceived social support, coping strategies, event-related rumination as potential factors determining participants' posttraumatic stress symptoms versus post traumatic growth levels.

Another strength is that, a broad perspective is presented in estimating various direct and indirect relationships between variables. For this aim, the variables were tested in a comprehensive model, proposed in the light of previous models in the literature. The separate/unique and combined contributions of variables were examined at the same time. The variables were grouped in order to consider the effects of pretrauma, peritrauma and posttrauma factors in a potentially sequential order. Moreover, in this study, besides two divergent outcomes of posttraumatic stress symptom severity and posttraumatic growth, the relation between them were also explored within the same sample.

Another strength of this study is that it provides a broad theoretical framework on the concepts of interest and related previous literature findings.

Finally, the results yield important information in order to define risk groups following a variety of traumatic events and helps to understand more clearly the mechanisms of traumatic consequences. In particular, examining the mediator roles of event-related rumination and ways of coping on these two divergent outcomes is considered to be a valuable contribution. Additionally, valuable information is provided regarding mental health care professionals in explaining the mechanisms of experiencing growth after trauma. The pathways established from two groups of personality traits to positive and/or negative consequences are considered to be interestingly important.

When the present study is considered in terms of limitations, first of all, the methodology of gathering data using self-report instruments via face-to-face one-time administration may inhibit the rates of disclosure of these traumatic material. Thus, some type of events (e.g., sexual/non-sexual assault, violence) may be underreported due to limited rapport with the participants. Another limitation of the study is related with the use of the Kish method. This method while ensuring a

random sampling from households, the study ended up with overrepresentation of female sample.

Secondly, the cross-sectional study design prohibited strict causal interpretations. However, through examining pathways via a model, this typically permitted the inference of some kind of causality.

Furthermore, the research instrument was criticized by the participants as being too long, thus validity of some responses may be effected. Finally, since data was gathered about traumatic events retrospectively, especially in event-related rumination inventory, the participants had difficulty remembering those periods immediately after the mentioned traumatic event. This may be critical for deliberate rumination in particular, because time may be needed to deliberately ruminate about the event and the inventory does not provide such information about when and how individuals started deliberately ruminating. Likewise, with respect to the posttraumatic diagnostic scale (PDS) where participants chose among a variety of traumatic events, the scale could not differentiate whether they have witnessed the event, learned from others or directly experienced it. This is a current distinction suggested in DSM 5, however in this study this criteria could not examined.

4.7 Clinical Implications and Future Directions

The results of the present study have essential implications for clinical practices. As mechanisms underlying the posttraumatic symptom severity and development of PTG become more understood, it might be possible for clinicians to attempt to foster PTG in individuals who seek mental health services following traumatic event. The role of personality, cognitive processing and coping strategies were explored and the pathways to developing growth provided guidance in approaching and treating individuals in the aftermath of traumatic events.

In terms of personality traits, the present study provided the pathway from neuroticism to posttraumatic growth through rumination and coping strategies. This can be evaluated an opportunity for those with neuroticism developing growth by using these adaptive post-trauma processes. This conclusion may encourage mental health professionals to implement interventions to facilitate these adaptive skills to those with high neuroticism.

The results of the present finding about the event-related factors also provide some insight in that, while more recent events and longer duration of symptoms predict greater symptom severity, only longer duration of symptoms predict higher levels of growth. The simple model also indicated that decreased symptom severity, predicts higher levels of PTG. Therefore, in order to foster growth, rather than focusing on duration of symptoms, diminishing the severity of symptoms by equipping the individual with adaptive ways of processing the trauma, must be the goal of mental health professionals. Furthermore, the clinician must pay attention to the type of the event while planning treatment. Knowing the tendency of injury/shocking events group, developing growth (appreciation of life, in particular), whereas intentional/assaultive violence group of events to increase symptom severity (all three symptoms, i.e., reexperiencing, avoidance, arousal), should alter the priorities of treatment goals. For example, Shakespeare-Finch & Armstrong, (2010) suggested that the clinician must be careful about an individual who experienced a sexual assault, not to initially encourage to improve interpersonal relationships.

In terms of posttrauma factors, PTG adds a new component to the treatment of trauma-related psychological problems, in that patients' efforts of struggling to understand the event and the impact on the individual, the clinician must capture these not as symptoms but as potential efforts for growth (Zoellner & Maercker, 2006). In mental health services, fostering ruminative processes, improving active coping mechanisms, and providing awareness of available (if any) social support would be facilitators of growth. Furthermore, the results of this study indicated that perceived social support and PTG are connected with each other via active coping. In treatment, the clinician also must promote the individuals to evaluate the support around them objectively.

One suggestion would be preparing a treatment manual indicating the possible effects of pretrauma factors, peritrauma and post trauma processing and the adaptive therapeutic strategies to foster PTG. The clinicians must encourage the patients to engage in adaptive cognitive strategies and active ways of coping. Therefore, intervention and guidance to cognitions by transforming intrusive ruminations to deliberate rumination, and encouraging to deal with the event through active ways of coping would be an essential part of treatment. However, the clinician

must be careful in order not to lead the individual to deny the suffering process. The clinician must allow the individual to find their own ways of dealing with the event while providing some guidance to promote hope and growth. Another suggestion for future research, is to apply qualitative data analysis in order to understand the nature of traumatic events, the meaning of these events, deliberate rumination and the content of this rumination in facilitating adaptive ways of coping and posttraumatic growth.

Further efforts may provide to identify other risk or contributory factors that are not addressed in this study that might have influence on posttraumatic stress symptom severity and/or posttraumatic growth.

Although the present study used a representative sample still these findings should be considered with caution in regard to general population. Therefore future research is necessary to replicate the findings in different samples or populations. It would be valuable to confirm the results of the model in clinical samples or following particular event-types. Furthermore, since 55% of the participants' reported traumatic events occurred more than 5 years ago, future research studies must evaluate the validity of retrospective nature of the findings. Indeed, further research also will be needed to explore these relations with more recent events and via longitudinal studies.

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APPENDICES

Appendix A: Socio-demographic Information Form

ODTÜ PSİKOLOJİ BÖLÜMÜ
Yetişkinlerde Olumsuz Yaşam Olayları ve Etkileri Araştırması

Küme no:_____ Hane no:_____ Anket no:_____
İl : İzmir İlçe :_____ Mahalle:_____
Cadde/Sokak : _____ Apartman No / Daire No:_____/_____
Görüşenin Adı Soyadı :_____
Sonuç/Durum: 01 Dolduruldu
02 Görüşme yarıda kaldı Nedeni: _____
03 Görüşmeyi reddetti Nedeni: _____
04 Randevu alındı _____
05 Ziyaret limiti doldu Tarihler: _____, _____, _____
06 Diğer(Açıklayınız)_____

DEMOGRAFİK VERİ FORMU

1. Yaş/Doğum tarihi

2. Cinsiyet K ☐ E ☐

3. Medeni Durumunuz? Bekar ☐ Nişanlı/Sözlü ☐ Evli ☐ Dul ☐ Boşanmış ☐
Birlikte Yaşıyor ☐ Diğer ☐_____

4. Eğitim durumunuz nedir? *(Son aldığınız diplomaya göre belirtiniz)*
Okur-yazar değil ☐ Okur-yazar ☐ İlkokul ☐ Ortaokul ☐ Lise ☐
Yüksekokul ☐ ☐ Üniversite Yüksek Lisans ☐ Doktora ☐

5. Halen para veya mal karşılığı bir işte çalışıyor musunuz?
Çalışıyorum ☐ Çalışmıyorum ☐ Diğer ☐ _____

5a. ***Çalışmıyor iseniz,*** çalışmama nedeniniz nedir?
Ev hanımı ☐ Emekli ☐ İş bulamama ☐ Öğrenci ☐ Gelir sahibi ☐
Engelli, hasta ☐ Diğer (belirtiniz): _____

5b. Ne kadar zamandır çalışmıyorsunuz? (Ay olarak belirtiniz)_____ ay

5c. ***Çalışıyor iseniz,*** çalıştığınız işteki konumunuz nedir?
Maaşlı ☐ Yevmiyeli ☐ İşveren ☐ Kendi hesabına ☐Ücretsiz aile işçisi ☐

6. Bir sağlık sigortanız var mı? Varsa hangi kuruma bağlı sigortalısınız?
Sigortası yok ☐ SSK ☐ BAĞ-KUR ☐ Emekli Sandığı ☐
Özel sigorta ☐ Kurum sigortası ☐ Yeşil kart ☐ Diğer (belirtiniz):_____

7. Hanenize giren geliri değerlendirdiğinizde aylık toplam geliriniz sizce ne düzeydedir?
Çok düşük ☐ Düşük ☐ Orta ☐ Ortanın üstü ☐ Yüksek ☐

8. Son iki yılda tedavi gerektiren ruhsal bir rahatsızlık geçirdiniz mi? Evet ☐ Hayır ☐
8a. ***Evet ise***, bu rahatsızlık nedeniyle nasıl bir tedavi gördünüz?
Psikolojik tedavi ☐ İlaç tedavisi ☐Diğer (lütfen belirtiniz):_____
8b. Halen bu ruhsal sorun nedeniyle tedavi görüyor musunuz? Evet ☐ Hayır ☐

Appendix B: Posttraumatic Stress Diagnostic Scale (PDS)

Sayın Katılımcı,

Bu çalışmanın amacı olumsuz/ travmatik yaşam olaylarının toplumda ne sıklıkla yaşandığını ve bunların olası psikolojik etkilerini araştırmaktır. Travmatik yaşam olayları yaşayan kişiler için geliştirilebilecek destek programlarının oluşturulmasında sizin vereceğiniz bilgiler çok değerli olacaktır. Bu yüzden lütfen cevaplarınızı durumunuzu yansıtacak şekilde titizlikle ve samimiyetle vermeye özen gösteriniz. Araştırmaya katılanların kişisel bilgileri ve verdikleri cevaplar kesinlikle gizli tutulacak ve yalnızca bilimsel araştırma amaçlı kullanılacaktır. Bu yüzden anket formuna isminizi yazmanıza gerek yoktur. Lütfen anketi doldurmadan önce gönüllü katılım formunu okuyup imzalayınız. Lütfen, her soru grubundan önce verilen açıklamaları dikkatlice okuyunuz ve bu açıklamalar temelinde işaretlemelerinizi yapınız. Araştırmaya katkılarınızdan dolayı teşekkür ederiz. Doktora öğrencisi Uzm.Psk. Ervin Gül

TSSTÖ / 1. Bölüm

Birçok kişi, hayatının herhangi bir döneminde, oldukça stresli ve travmatik bir olay yaşamış ya da böyle bir olaya tanık olmuştur. Aşağıda belirtilen olaylar içinde, *kendi başınızdan geçen ya da tanık olduğunuz* olayları yanındaki kutuyu işaretleyerek belirtiniz. *Birden fazla olay işaretleyebilirsiniz.*

(1)	Ciddi bir kaza, yangın ya da patlama olayı (örneğin, trafik kazası, iş kazası, çiftlik kazası, araba, uçak ya da tekne kazası)	☐
(2)	Doğal afet (örneğin, hortum, kasırga, sel baskını ya da büyük bir [illegible])	☐
(3)	Aile üyelerinden biri ya da tanıdığınız bir kişi tarafından fiziksel saldırıya maruz kalmak (örneğin, dövülme, saldırıya uğrayıp soyulma, silahlı saldırı, bıçaklanma ya da silahla rehin alınma)	☐
(4)	Tanımadığınız biri tarafından fiziksel bir saldırıya maruz kalmak (örneğin, kapkaç, gasp, saldırıya uğrayıp soyulma, silahlı saldırı, bıçaklanma ya da silahla rehin alınma)	☐
(5)	Aile üyelerinden biri ya da tanıdığınız bir kişi tarafından cinsel bir saldırıya maruz kalma (örneğin, fiziksel temas içeren taciz, tecavüze teşebbüs ya da tecavüz)	☐
(6)	Tanımadığınız bir kişi tarafından cinsel bir saldırıya maruz kalmak (örneğin, fiziksel temas içeren taciz, tecavüze teşebbüs ya da tecavüz)	☐
(7)	Askeri bir çarpışma ya da savaş alanında bulunma	☐
(8)	18 yaşından daha küçük olduğunuz bir dönemde kendinizden 5 ya da daha büyük yaşta biriyle cinsel temas (örneğin, cinsel organlarla, göğüslerle temas)	☐
(9)	Hapsedilme (örneğin, cezaevine düşme, savaş esiri olma, rehin alınma)	☐
(10)	İşkenceye maruz kalma	☐
(11)	Hayatı tehdit eden bir hastalık	☐
(12)	Sevilen ya da yakın birinin beklenmedik ölümü	☐

(13)	Bunların dışında bir travmatik olay	☐
(14)	13. Maddeyi işaretlediyseniz aşağıda bu travmatik olayı kısaca anlatınız: _____	
YUKARIDAKİ OLAYLARDAN HERHANGİ BİRİNİ İŞARETLEDİYSENİZ, SORULARI YANITLAMAYA DEVAM EDİN. *HİÇBİR MADDEYİ İŞARETLEMEDİYSENİZ, "TKÖÖ" BAŞLIKLI ÖLÇEĞE GEÇEREK DEVAM EDİNİZ.*		

2. Bölüm

(15) 1. Bölümde **birden fazla** olay işaretlediyseniz, aşağıda bu olaylardan ***size en çok acı veren veya sizi en fazla rahatsız eden*** olayın yanındaki kutuyu işaretleyiniz. Eğer, 1.Bölümde **sadece bir** olayı işaretlediyseniz, aşağıda da aynı olayı tekrar işaretleyiniz.

(a)	Kaza (araba ya da iş kazası gibi)	☐
(b)	Doğal afet	☐
(c)	Aile üyelerinden biri ya da tanıdığınız bir kişi tarafından fiziksel saldırıya maruz kalma	☐
(d)	Tanımadığınız biri tarafından fiziksel bir saldırıya maruz kalmak	☐
(e)	Aile üyelerinden biri ya da tanıdığınız bir kişi tarafından cinsel bir saldırıya maruz kalma	☐
(f)	Tanımadığınız bir kişi tarafından cinsel bir saldırıya maruz kalma	☐
(g)	Askeri bir çarpışma ya da savaş alanında bulunma	☐
(h)	18 yaşından daha küçük olduğunuz bir dönemde kendinizden 5 ya da daha büyük yaşta biriyle cinsel temas	☐
(i)	Hapsedilme	☐
(j)	İşkenceye maruz kalma	☐
(k)	Hayatı tehdit eden bir hastalık	☐
(l)	Sevilen ya da yakın birinin beklenmedik ölümü	☐
(m)	Bunların dışında bir olay	☐
(n)	Aşağıda boş bırakılan yerde yukarıda işaretlemiş olduğunuz travmatik olayı kısaca anlatınız. _____	

Bu olay sizi nasıl etkiledi?

_____

_____

*Lütfen bundan sonraki tüm sorulara, yukarıda işaretleyip **ANLATTIĞINIZ OLAYI** düşünerek cevap veriniz.*

(16) Bu travmatik olay **ne kadar zaman önce** meydana geldi? (**YALNIZCA BİR TANESİNİ** işaretleyiniz)

(a)	1 aydan daha az	☐

(b)	1-3 ay arası	☐
(c)	3-6 ay arası	☐
(d)	6 ay – 3 yıl arası	☐
(e)	3-5 yıl arası	☐
(f)	5 yıldan daha fazla	☐

Aşağıdaki sorularda, **Evet** için 'E' harfini **Hayır** için 'H' harfini daire içine alınız.
Bu travmatik olay sırasında:

(17)	Fiziksel bir yara aldınız mı?	E	H
(18)	Başka bir kişi fiziksel bir yara aldı mı?	E	H
(19)	Hayatınızın tehlikede olduğunu düşündünüz mü?	E	H
(20)	Başka bir kişinin hayatının tehlikede olduğunu düşündünüz mü?	E	H
(21)	Kendinizi çaresiz hissettiniz mi?	E	H
(22)	Büyük bir korku veya dehşet duygusu yaşadınız mı?	E	H

3. Bölüm

Aşağıda travmatik bir olayın ardından insanların yaşayabileceği bazı sorunlar belirtilmiştir. Her maddeyi dikkatlice okuyunuz ve *GEÇTİĞİMİZ AY İÇİNDE* bu sorunun *sizi ne sıklıkta* rahatsız ettiğini en iyi gösteren sayıyı (0, 1, 2 ya da 3) daire içine alınız.
(Aşağıda belirtilen olayla ilgili her sıkıntıyı 15. maddede işaretlediğiniz ve anlattığınız travmatik olay açısından değerlendiriniz).

Örneğin, söz ettiğiniz olay geçtiğimiz ay içinde aşağıda verilen sıkıntılar açısından sizi yalnızca bir kez rahatsız ettiyse, 0'ı; haftada bir kez rahatsız ettiyse, 1'i işaretleyin.

0 Hiç ya da yalnızca bir kez
1 Haftada 1 ya da daha az/kısa bir süre
2 Haftada 2 – 4 kez / yarım gün
3 Haftada 5 ya da daha fazla / neredeyse bütün gün

(23)	Bu travmatik olay hakkında, istemediğiniz halde aklınıza rahatsız edici düşünceler ya da hayallerin gelmesi	0	1	2	3
(24)	Bu travmatik olayla ilgili kötü rüyalar ya da kabuslar görme	0	1	2	3
(25)	Bu travmatik olayı yeniden yaşama, sanki tekrar oluyormuş gibi hissetme ya da öyle davranma	0	1	2	3
26)	Bu travmatik olayı hatırladığınızda duygusal olarak altüst olduğunuzu hissetme (örneğin, korku, öfke, üzüntü, suçluluk vb. gibi duygular yaşama)	0	1	2	3
(27)	Bu travmatik olayı hatırladığınızda vücudunuzda fiziksel tepkiler meydana gelmesi (örneğin, ter boşalması, kalbin hızlı çarpması)	0	1	2	3
(28)	Bu travmatik olayı düşünmemeye, olay hakkında konuşmamaya ya da olayın yarattığı duyguları hissetmemeye çalışma	0	1	2	3
(29)	Size bu travmatik olayı hatırlatan etkinliklerden, kişilerden ya da yerlerden kaçınmaya çalışma	0	1	2	3
(30)	Bu travmatik olayın önem taşıyan bir bölümünü hatırlayamama	0	1	2	3

(31)	Önemli etkinliklere çok daha az sıklıkta katılma ya da bu etkinliklere çok daha az ilgi duyma	0	1	2	3
(32)	Çevrenizdeki insanlarla aranızda bir mesafe hissetme ya da onlardan koptuğunuz duygusuna kapılma	0	1	2	3
(33)	Duygusal açıdan kendinizi donuk, uyuşuk, taşlaşmış gibi hissetme (örneğin, ağlayamama ya da sevecen duygular yaşayamama)	0	1	2	3
(34)	Gelecekle ilgili planlarınızın ya da umutlarınızın gerçekleşmeyeceği duygusuna kapılma (örneğin, bir meslek hayatınızın olmayacağı, evlenmeyeceğiniz, çocuğunuzun olmayacağı ya da ömrünüzün uzun olmayacağı duygusu)	0	1	2	3
(35)	Uykuya dalma ya da uyumada zorluklar yaşama	0	1	2	3
(36)	Çabuk sinirlenme ya da öfke nöbetleri geçirme	0	1	2	3
(37)	Düşüncenizi ya da dikkatinizi belli bir noktada toplamada sıkıntı (örneğin, bir konuşma sırasında konuyu kaçırma, televizyondaki bir öyküyü takip edememe, okuduğunuz şeyi unutma)	0	1	2	3
(38)	Aşırı derecede tetikte olma (örneğin, çevrenizde kimin olduğunu kontrol etme, sırtınız bir kapıya dönük olduğunda rahatsız olma,vb.)	0	1	2	3
(39)	Diken üstünde olma ya da kolayca irkilme (örneğin, birisi peşinizden yürüdüğünde, ani ve yüksek sesler duyduğunuzda)	0	1	2	3
(40)	Yukarıda belirttiğiniz sorunları kaç aydır yaşıyorsunuz? (**YALNIZCA BİR TANESİNİ** işaretleyiniz) Bir aydan daha az ☐ 1-3 ay arası ☐ 3 aydan daha fazla ☐				
(41)	Bu sorunlar söz konusu travmatik olaydan ne kadar sonra başladı? (BİR TANESİNİ işaretleyiniz) 6 aydan daha az ☐ 6 ay ya da daha fazla ☐				

4. Bölüm

Yukarıda (3.Bölüm'de) işaretlediğiniz sorunların **GEÇTİĞİMİZ AY SÜRESİNCE** aşağıda belirtilen alanlarda sizi engelleyip engellemediğini, **Evet** için 'E' harfini, **Hayır** için 'H' harfini daire içine alarak belirtiniz.

(42)	İş hayatı	E	H
(43)	Evin günlük işleri	E	H
(44)	Arkadaşlarınızla ilişkiler	E	H
(45)	Eğlence ve boş zamanlardaki etkinlikler	E	H
(46)	Okulla ilgili işler	E	H
(47)	Ailenizle ilişkiler	E	H
(48)	Cinsel yaşam	E	H
(49)	Genel anlamda hayattan memnuniyet	E	H
(50)	Hayatınızın her alanında genel işleyiş düzeyi	E	H

Appendix C: Event-Related Rumination Inventory (ERRI)

Belirttiğinize benzer bir yaşantıdan sonra, her zaman olmasa da, bazen insanlar, bu deneyim hakkında **düşünmeye çalışmamalarına rağmen kendilerini onunla ilgili düşünceler içinde bulurlar**. Aşağıda yer alan maddeleri olayın hemen ardındaki haftalarda ne sıklıkla yaşadığınızı belirtiniz.

0- Hiç olmadı 1- Nadiren 2- Bazen 3- Sıklıkla

1. İstemediğim hâlde olayı düşündüm.	0 1 2 3
2. Olayla ilgili düşünceler aklıma geldi ve onlar hakkında düşünmeden duramadım.	0 1 2 3
3. Olayla ilgili düşünceler dikkatimi dağıttı ya da beni konsantre olmaktan alıkoydu.	0 1 2 3
4. Olayla ilgili görüntü ya da düşüncelerin zihnime girmesine engel olamadım.	0 1 2 3
5. Olaya ait düşünceler, anılar ya da görüntüler istemesem de aklıma geldi.	0 1 2 3
6. Olayla ilgili düşünceler deneyimimi yeniden yaşamama neden oldu.	0 1 2 3
7. Olayı hatırlatan şeyler, yaşadığım deneyimimle ilgili düşünceleri geri getirdi.	0 1 2 3
8. Kendimi otomatik olarak ne olmuş olduğu ile ilgili düşünürken buldum.	0 1 2 3
9. Diğer şeyler beni, yaşadığım deneyimle ilgili düşünmeye yönlendirip durdu.	0 1 2 3
10. Olayla ilgili düşünmemeye çalıştım ama düşünceleri aklımdan çıkaramadım.	0 1 2 3

Belirttiğinize benzer bir yaşantıdan sonra, her zaman olmasa da, bazen insanlar, **özellikle ve kasıtlı olarak bu deneyim hakkında düşünerek vakit geçirirler**. Aşağıda yer alan maddeler için, olayın hemen ardındaki haftalarda eğer olduysa ne sıklıkla, belirtilen konular ile ilgili olarak düşünmek için özellikle vakit geçirdiğinizi belirtiniz.

1. Yaşadığım deneyimden anlam bulup bulamayacağımla ilgili düşündüm.	0 1 2 3
2. Yaşamımdaki değişikliklerin deneyimimle uğraşmaktan kaynaklanıp kaynaklanmadığını düşündüm.	0 1 2 3
3. Kendimi, yaşadığım deneyimle ilgili duygularım hakkında düşünmeye zorladım.	0 1 2 3
4. Yaşadığım deneyimin sonucunda birşey öğrenip öğrenmediğimle ilgili düşündüm.	0 1 2 3
5. Bu deneyimin dünya ile ilgili inançlarımı değiştirip değiştirmediği hakkında düşündüm.	0 1 2 3
6. Bu deneyimin geleceğim için ne anlama gelebileceği hakkında düşündüm.	0 1 2 3
7. Diğerleri ile olan ilişkilerimin, yaşadığım deneyimin ardından değişip değişmediği hakkında düşündüm.	0 1 2 3
8. Kendimi olayla ilgili duygularımla baş etmeye zorladım.	0 1 2 3
9. Olayın beni nasıl etkilemiş olduğu hakkında özellikle düşündüm.	0 1 2 3
10. Olay hakkında düşündüm ve ne olduğunu anlamaya calıştım.	0 1 2 3

Appendix D: Post traumatic Growth Inventory (PTGI)

TSGÖ

Aşağıda yer alan her cümleyi dikkatle okuyunuz. Belirtmiş olduğunuz travmatik olayın sonrasında, yaşamınızın bu olaya bağlı olarak ne derece değiştiğini aşağıdaki ölçekte uygun rakamı daire içine alarak belirtiniz.

0 = Travmadan dolayı böyle bir değişiklik yaşamadım
1 = Travmadan dolayı bu değişikliği çok az yaşadım
2 = Travmadan dolayı bu değişikliği az derecede yaşadım
3 = Travmadan dolayı bu değişikliği orta derecede yaşadım
4 = Travmadan dolayı bu değişikliği oldukça fazla derecede yaşadım
5 = Travmadan dolayı bu değişikliği aşırı derecede yaşadım

(1)	Hayatıma verdiğim değer arttı.	0	1	2	3	4	5
(2)	Hayatımın kıymetini anladım.	0	1	2	3	4	5
(3)	Yeni ilgi alanları geliştirdim.	0	1	2	3	4	5
(4)	Kendime güvenim arttı.	0	1	2	3	4	5
(5)	Manevi konuları daha iyi anladım.	0	1	2	3	4	5
(6)	Zor zamanlarda başkalarına güvenebileceğimi anladım.	0	1	2	3	4	5
(7)	Hayatıma yeni bir yön verdim.	0	1	2	3	4	5
(8)	Kendimi diğer insanlara daha yakın hissetmeye başladım.	0	1	2	3	4	5
(9)	Duygularımı ifade etme isteğim arttı.	0	1	2	3	4	5
(10)	Zorluklarla başa çıkabileceğimi anladım.	0	1	2	3	4	5
(11)	Hayatımı daha iyi şeyler yaparak geçirebileceğimi anladım.	0	1	2	3	4	5
(12)	Olayları olduğu gibi kabullenmeyi öğrendim.	0	1	2	3	4	5
(13)	Yaşadığım her günün değerini anladım.	0	1	2	3	4	5
(14)	Yaşadığım olaydan (travma) sonra benim için yeni fırsatlar doğdu.	0	1	2	3	4	5
(15)	Başkalarına karşı şefkat hislerim arttı.	0	1	2	3	4	5
(16)	İnsanlarla ilişkilerimde daha fazla gayret göstermeye başladım.	0	1	2	3	4	5
(17)	Değişmesi gereken şeyleri değiştirmek için daha fazla gayret göstermeye başladım.	0	1	2	3	4	5
(18)	Dini inancım daha da güçlendi.	0	1	2	3	4	5
(19)	Düşündüğümden daha güçlü olduğumu anladım.	0	1	2	3	4	5
(20)	İnsanların ne kadar iyi olduğu konusunda çok şey öğrendim.	0	1	2	3	4	5
(21)	Başkalarına ihtiyacım olabileceğini kabul etmeyi öğrendim.	0	1	2	3	4	5

Appendix E: Basic Personality Traits Inventory (BPTI)

TKÖÖ

Aşağıda size uyan ya da uymayan pek çok kişilik özelliği bulunmaktadır. Bu özelliklerden her birinin sizin için **ne kadar uygun** olduğunu ilgili rakamı daire içine alarak belirtiniz.

Örneğin; Kendimi ..... biri olarak görüyorum.
Verilen özelliğin size ne kadar uyduğunu daire içine alınız;
1: Hiç uygun değil 2: Uygun değil 3: Kararsızım 4: Uygun 5: Çok uygun

		Hiç uygun değil	**Uygun değil**	**Kararsızım**	**Uygun**	**Çok uygun**
(1)	Aceleci	1	2	3	4	5
(2)	Yapmacık	1	2	3	4	5
(3)	Duyarlı	1	2	3	4	5
(4)	Konuşkan	1	2	3	4	5
(5)	Kendine güvenen	1	2	3	4	5
(6)	Soğuk	1	2	3	4	5
(7)	Utangaç	1	2	3	4	5
(8)	Paylaşımcı	1	2	3	4	5
(9)	Geniş-rahat	1	2	3	4	5
(10)	Cesur	1	2	3	4	5
(11)	Agresif	1	2	3	4	5
(12)	Çalışkan	1	2	3	4	5
(13)	İçten pazarlıklı	1	2	3	4	5
(14)	Girişken	1	2	3	4	5
(15)	İyi niyetli	1	2	3	4	5
(16)	İçten	1	2	3	4	5
(17)	Kendinden emin	1	2	3	4	5
(18)	Huysuz	1	2	3	4	5
(19)	Yardımsever	1	2	3	4	5
(20)	Kabiliyetli	1	2	3	4	5
(21)	Üşengeç	1	2	3	4	5
(22)	Sorumsuz	1	2	3	4	5
(23)	Sevecen	1	2	3	4	5
(24)	Pasif	1	2	3	4	5
(25)	Disiplinli	1	2	3	4	5
(26)	Açgözlü	1	2	3	4	5
(27)	Sinirli	1	2	3	4	5

		Hiç uygun değil	**Uygun değil**	**Kararsızım**	**Uygun**	**Çok uygun**
(28)	Canayakın	1	2	3	4	5
(29)	Kızgın	1	2	3	4	5
(30)	Sabit fikirli	1	2	3	4	5
(31)	Görgüsüz	1	2	3	4	5
(32)	Durgun	1	2	3	4	5
(33)	Kaygılı	1	2	3	4	5
(34)	Terbiyesiz	1	2	3	4	5
(35)	Sabırsız	1	2	3	4	5
(36)	Yaratıcı	1	2	3	4	5
(37)	Kaprisli	1	2	3	4	5
(38)	İçine kapanık	1	2	3	4	5
(39)	Çekingen	1	2	3	4	5
(40)	Alıngan	1	2	3	4	5
(41)	Hoşgörülü	1	2	3	4	5
(42)	Düzenli	1	2	3	4	5
(43)	Titiz	1	2	3	4	5
(44)	Tedbirli	1	2	3	4	5
(45)	Azimli	1	2	3	4	5

Appendix F: Ways of Coping – Turkish Form (WCI-T)

BYÖ

Aşağıda insanların sıkıntılarını gidermek için kullanabilecekleri bazı yollar belirtilmektedir. Cümlelerin her birini dikkatlice okuduktan sonra, *kendi sıkıntılarınızı düşünerek,* bu yolları hiç kullanmıyorsanız hiçbir zaman, kimi zaman kullanıyorsanız bazen, çok sık kullanıyorsanız her zaman seçeneğini belirtiniz.

		Hiçbir zaman	**Bazen**	**Her zaman**
(1)	Aklımı kurcalayan şeylerden kurtulmak için değişik işlerle uğraşırım	1	2	3
(2)	Bir mucize olmasını beklerim	1	2	3
(3)	İyimser olmaya çalışırım	1	2	3
(4)	Çevremdeki insanlardan sorunları çözmemde bana yardımcı olmalarını beklerim	1	2	3
(5)	Bazı şeyleri büyütmeyip üzerinde durmamaya çalışırım	1	2	3
(6)	Sakin kafayla düşünmeye ve öfkelenmemeye çalışırım	1	2	3
(7)	Durumun değerlendirmesini yaparak en iyi kararı vermeye çalışırım	1	2	3
(8)	Ne olursa olsun direnme ve mücadele etme gücünü kendimde hissederim	1	2	3
(9)	Olanları unutmaya çalışırım	1	2	3
(10)	Başa gelen çekilir diye düşünürüm	1	2	3
(11)	Durumun ciddiyetini anlamaya çalışırım	1	2	3
(12)	Kendimi kapana sıkışmış gibi hissederim	1	2	3
(13)	Duygularımı paylaştığım kişilerin bana hak vermesini isterim	1	2	3
(14)	'Her işte bir hayır var' diye düşünürüm	1	2	3
(15)	Dua ederek Allah'tan yardım dilerim	1	2	3
(16)	Elimde olanlarla yetinmeye çalışırım	1	2	3
(17)	Olanları kafama takıp sürekli düşünmekten kendimi alamam	1	2	3
(18)	Sıkıntılarımı içimde tutmaktansa paylaşmayı tercih ederim	1	2	3
(19)	Mutlaka bir çözüm yolu bulabileceğime inanıp bu yolda uğraşırım	1	2	3
(20)	'İş olacağına varır' diye düşünürüm	1	2	3
(21)	Ne yapacağıma karar vermeden önce arkadaşlarımın fikrini alırım	1	2	3
(22)	Kendimde her şeye yeniden başlayacak gücü bulurum	1	2	3
(23)	Olanlardan olumlu bir şeyler çıkarmaya çalışırım	1	2	3
(24)	Bunun alın yazım olduğunu ve değişmeyeceğini düşünürüm	1	2	3
(25)	Sorunlarıma farklı çözüm yolları ararım	1	2	3
(26)	'Olanları keşke değiştirebilseydim' diye düşünürüm	1	2	3

(27)	Hayatla ilgili yeni bir bakış açısı geliştirmeye çalışırım	1	2	3
(28)	Sorunlarımı adım adım çözmeye çalışırım	1	2	3
(29)	Her şeyin istediğim gibi olamayacağını düşünürüm	1	2	3
(30)	Dertlerimden kurtulayım diye fakir fukaraya sadaka veririm	1	2	3
(31)	Ne yapacağımı planlayıp ona göre davranırım	1	2	3
(32)	Mücadele etmekten vazgeçerim	1	2	3
(33)	Sıkıntılarımın kendimden kaynaklandığını düşünürüm	1	2	3
(34)	Olanlar karşısında 'kaderim buymuş' derim	1	2	3
(35)	'Keşke daha güçlü bir insan olsaydım' diye düşünürüm	1	2	3
(36)	'Benim suçum ne' diye düşünürüm	1	2	3
(37)	'Allah'ın takdiri buymuş deyip' kendimi teselli etmeye çalışırım	1	2	3
(38)	Temkinli olmaya ve yanlış yapmamaya çalışırım	1	2	3
(39)	Çözüm için kendim bir şeyler yapmak isterim	1	2	3
(40)	Hep benim yüzümden oldu diye düşünürüm	1	2	3
(41)	Hakkımı savunmaya çalışırım	1	2	3
(42)	Bir kişi olarak olgunlaştığımı ve iyi yönde geliştiğimi hissederim	1	2	3

Appendix G: Multidimensional Scale of Perceived Social Support (MSPSS)

ÇBASDÖ

Aşağıda 12 cümle ve her birinde de cevaplarınızı işaretlemeniz için 1 den 7'ye kadar rakamlar
verilmiştir. Her cümlede söylenenin, *yaşadığınız travma sonrasında* sizin için ne kadar doğru olduğunu veya olmadığını belirtmek için o cümle altındaki rakamlardan yalnız bir tanesini daire içine alarak işaretleyiniz. Bu şekilde 12 cümlenin her birinde bir işaret koyarak cevaplarınızı veriniz.

		Kesinlikle hayır						Kesinlikle evet
(1)	İhtiyacım olduğunda yanımda olan özel bir insan var.	1	2	3	4	5	6	7
(2)	Sevinç ve kederlerimi paylaşabileceğim özel bir insan var.	1	2	3	4	5	6	7
(3)	Ailem bana gerçekten yardımcı olmaya çalışır.	1	2	3	4	5	6	7
(4)	İhtiyacım olan duygusal yardımı ve desteği ailemden alırım.	1	2	3	4	5	6	7
(5)	Beni gerçekten rahatlatan özel bir insan var.	1	2	3	4	5	6	7
(6)	Arkadaşlarım bana gerçekten yardımcı olmaya çalışırlar.	1	2	3	4	5	6	7
(7)	İşler kötü gittiğinde arkadaşlarıma güvenebilirim.	1	2	3	4	5	6	7
(8)	Sorunlarımı ailemle konuşabilirim.	1	2	3	4	5	6	7
(9)	Sevinç ve kederlerimi paylaşabileceğim arkadaşlarım var.	1	2	3	4	5	6	7
(10)	Yaşamımda duygularıma önem veren özel bir insan var.	1	2	3	4	5	6	7
(11)	Kararlarımı vermede ailem bana yardımcı olmaya isteklidir.	1	2	3	4	5	6	7
(12)	Sorunlarımı arkadaşlarımla konuşabilirim.	1	2	3	4	5	6	7

KATILIMINIZ İÇİN TEŞEKKÜR EDERİZ.

Telefon:

Appendix H: Kish Table

KISH METHOD

AŞAĞIDAKİ TABLOYU KULLANARAK ANKETİ KİME UYGULAYACAĞINIZI BELİRLEYİNİZ.

BİREYSEL GÖRÜŞME UYGUNLUK KOŞULLARI:

- Bu evde yaşayan
- 18 yaş ve üstü

kişileri önce en yaşlı erkekten en genç erkeğe, sonra en yaşlı kadından en genç kadına kadar, bu bilgiyi veren kişiye yakınlık derecesine (eşi, oğlu, ev arkadaşı, kiracısı, bebek bakıcısı gibi) göre aşağıdaki tablo üzerinde sıralayınız. Tablo 2'yi kullanarak görüşme için seçtiğiniz kişiyi Tablo 1'de daire içine alarak işaretleyiniz.

Tablo 1. Hanede Yaşayan Kişilerin Listesi

Sıra No	ERKEK	Yaş	Sıra No	KADIN	Yaş

Görüşülecek kişiyi hanede yaşayan kişi sayısına ve uygulayacağınız anketin numarasının sonundaki rakama göre belirleyiniz ve Tablo 1'de de bu kişiyi daire içine alarak işaretleyiniz.

Tablo 2. Bireysel Görüşme Yapılacak Kişinin Seçimi

Hanedeki Kişi Sayısı	Anket No. Sonundaki Rakam									
	0	1	2	3	4	5	6	7	8	9
0	Görüşme Bitti									
1	1	1	1	1	1	1	1	1	1	1
2	1	2	1	2	1	2	1	2	1	2
3	3	1	2	3	1	2	3	1	2	3
4	1	2	3	4	1	2	3	4	1	2
5	1	2	3	4	5	1	2	3	4	5
6	6	1	2	3	4	5	6	1	2	3
7	5	6	7	1	2	3	4	5	6	7
8	1	2	3	4	5	6	7	8	1	2
9	8	9	1	2	3	4	5	6	7	8
10 ve üstü	9	10	1	2	3	4	5	6	7	8

Appendix I: Informed Consent

Gönüllü Katılım Formu

Bu çalışma, Orta Doğu Teknik Üniversitesi öğretim üyesi Prof. Dr. A. Nuray Karancı danışmanlığında Doktora Öğrencisi Ervin Gül tarafından yürütülen bir çalışmadır.

Çalışmanın amacı, insanların başlarına gelen olumsuz yaşam olayları ve bu olaylar sonrasında yaşanabilecek psikolojik etkiler hakkında bilgi toplamaktır. Ayrıca, olayla birlikte bireylerin hayatlarında yaşanan değişimler ve olay sonrası süreçlerin etkileri de incelenecektir. Bu kapsamda bireylerin yaşayabileceği olumsuz olaylar sonrasında yaşanabilen ruhsal sıkıntılar, olayın günlük hayata olan etkileri, kişinin bu olay sonrasında kullandığı baş etme yöntemleri, kişiliği, sosyal destekleri, bu olaya ilişkin düşünce süreçleri ve olay sonrasında yaşanabilen olumlu gelişmelerle ilgili sorular sorulacaktır.

Sizin vereceğiniz bilgiler, olumsuz/travmatik olaylar sonrasında bireylere uygulanabilecek psikolojik destek programları geliştirebilmek için çok değerli katkılar sağlayacaktır. Çalışmaya katılım gönüllülük esasına dayanır. Ankette, sizden kimlik belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir; elde edilecek sonuçlar bilimsel yayımlarda kullanılacaktır. Anket sorularını cevaplarken herhangi bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplamayı bırakabilirsiniz. Böyle bir durumda anketi uygulayan kişiye, anketi tamamlamadığınızı söylemek yeterli olacaktır. Anket sonunda, bu çalışmayla ilgili sorularınız cevaplanacaktır.

Bu çalışmaya katıldığınız için ve katkılarınızdan dolayı şimdiden teşekkür ederiz. Çalışma hakkında daha fazla bilgi almak için Psikoloji Bölümü Doktora Öğrencisi Ervin Gül ile iletişim kurabilirsiniz.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip anketi iade edebileceğimi biliyorum. Verdiğim bilgilerin, kimliğim belirtilmeden bilimsel amaçlı yayımlarda kullanılmasını kabul ediyorum. (Formu doldurup imzaladıktan sonra uygulayıcıya geri veriniz).

Tarih İmza

----/----/-----

Appendix J: Debriefing Form

KATILIM SONRASI BİLGİ FORMU

Bu çalışma daha önce de belirtildiği gibi ODTÜ Psikoloji Bölümü öğretim üyelerinden Prof. Dr. A. Nuray Karancı danışmanlığında Doktora öğrencisi Ervin Gül tarafından İzmir'de yürütülen bir çalışmadır. Bu çalışmada temel olarak, travmatik/ olumsuz yaşam olayları, olay türleri ve yaygınlıkları, bireylerin özelliklerinin, olayla ilgili özelliklerin ve olay sonrası algılanan sosyal desteğin, baş etme yöntemlerinin ve olaya ilişkin düşünce süreçlerinin etkileri ve sonuçları incelenecektir.

Daha önce yapılan çalışmalar, çeşitli olumsuz olayların yaygın olarak yaşandığı ve bu olayların etkilerinin de pek çok farklı faktöre göre değiştiğini göstermiştir. Bu faktörlerden olay öncesinde bu olaya maruz kalan kişinin kişiliği, yaşanan olayla ilgili olarak olay türünün, olayı yaşama zamanının, ve olay sonrasında algılanan sosyal desteğin, kullanılan baş etme yöntemlerinin ve olaya ilişkin düşünce süreçlerinin etkileri gösterilmiştir. Bu bulgular temelinde, bu çalışmada bu faktörlerin yansımaları ve doğurduğu olumlu (travma sonrası gelişim) ya da olumsuz sonuçlar (travma sonrası stres bozukluğu) araştırılacaktır. Tüm veriler birlikte değerlendirildiğinde kuramsal bir model çerçevesinde test edilecektir.

Bu çalışmadan alınacak ilk verilerin Kasım 2013 sonunda elde edilmesi amaçlanmaktadır. Elde edilen bilgiler sadece bilimsel araştırma ve yazılarda kullanılacaktır. Çalışmanın sonuçlarını öğrenmek ya da bu araştırma hakkında daha fazla bilgi almak için ODTÜ Psikoloji Doktora öğrencisi Uzm. Psk. Ervin Gül'e başvurabilirsiniz. Bu araştırmaya katıldığınız için tekrar çok teşekkür ederiz.

Appendix K: Tez Fotokopi Izin Formu

TEZ FOTOKOPİSİ İZİN FORMU

ENSTİTÜ

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

YAZARIN

Soyadı : Gül
Adı : Ervin
Bölümü : Psikoloji

TEZİN ADI (İngilizce) : PREVALENCE RATES OF TRAUMATIC EVENTS, PROBABLE PTSD AND PREDICTORS OF POSTTRAUMATIC STRESS AND GROWTH IN A COMMUNITY SAMPLE FROM İZMİR

TEZİN TÜRÜ : Yüksek Lisans [ ] Doktora [X]

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

TEZİN KÜTÜPHANEYE TESLİM TARİHİ:

Appendix L: Curriculum Vitae

PERSONAL INFORMATION

Surname, Name: Gül, Ervin

Nationality: Turkish (TC)

Date and Place of Birth: 28 February 1978, İzmir

Marital Status: Married

Phone: +90 232 355 00 00

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email: ervin.gul@gediz.edu.tr

EDUCATION

Degree	Institution	Year of Graduation
BS	METU, Psychology	1999
High school	İzmir Özel Çakabey Koleji	1995

WORK EXPERIENCE

Year	Place	Enrollment
2013-present	Gediz University, Department of Psychology	Instructor
2011-2012	İzmir University of Economics, Department of Psychology	Part-time Instructor
2007-2009	METU	Project Assistant

FOREIGN LANGUAGES

Advanced English, Intermediate German

Appendix M: Turkish Summary

1. GİRİŞ

Travmatik olaylar

Travmatik olaylar bireyin bütünlüğüne gelebilecek en önemli tehditlerden biridir. Buna bağlı olarak travmatik yaşam olayıyla ortaya çıkan sorunlar da büyüktür. Travmatik yaşantılar potansiyel olarak bireylerin yaşamları boyunca karşılaşabilecekleri olaylardır. Ancak, bir psikiyatri sınıflandırma sistemi olan "Ruhsal ve Davranışsal Bozuklukların Sınıflandırılması ve Amerikan Psikiyatri Birliği'nin Tanısal ve İstatistiki Elkitabı'nın dördüncü baskısı olan DSM-IV-TR'te (2001), bir olayın travmatik olarak kabul edilmesi için Travma Sonrası Stres Bozukluğu (TSSB) için belirttiği "travmatik olay" kriterlerine uyması gerektiği ileri sürülmektedir. Bu kriterler: (1) kişinin gerçek bir ölüm ya da ölüm tehdidi, ağır bir yaralanma, ya da kendisinin ya da başkalarının fiziksel bütünlüğüne tehdit edici bir olayı yaşamış, böyle bir olaya tanık olmuş ya da böyle bir olayla karşı karşıya gelmiş olması ve (2) kişinin bu olaya aşırı korku, çaresizlik, ya da dehşetle tepki vermiş olmasıdır. Farklı bir çok ülkede genel nüfustan alınan temsili örneklemlerle yürütülen çalışmalar, travmatik olayların yaşam boyu yaygınlığının oldukça yüksek (%28- %90) olduğunu göstermektedir (Frans vd., 2005; Norris vd., 2003).

Travma sonrası stres bozukluğu (TSSB)

Travma sonrası stres bozukluğu (TSSB), pek çok kişi için travmatik olabilecek şiddette bir yaşantı ardından ortaya çıkan, intruzif (girici) düşünceler, sıkıntılı rüyalar, yeniden yaşantılamalar, kaçınma davranışları, artmış ve süreklilik gösteren uyarılmışlık hali gibi belirtilerle kendini gösteren, toplumsal izolasyon gibi davranış değişiklikleri görülebilen ve kişide belirgin işlevsellik kaybına yol açan bir kaygı bozukluğudur (Özgüler vd., 2004). Travmatik bir olay yaşayan herkes tanı alacak bir ruhsal hastalık geliştirmeyebilir. TSSB'nin yaşam boyu yaygınlık oranları temsili genel popülasyon çalışmalarında %5.6 (Frans vd., 2005), %6.8 (Kessler vd., 2005), %8.3 (Breslau vd., 1998) ve %11.2 (Norris vd., 2003) olarak bulunmuştur.

Travma sonrası kronikleşmeyi, TSSB gibi psikiyatrik bozuklukların gelişimini ve iyileşmeyi etkileyen etkenler Parkinson (2000) tarafından aşağıdaki şekilde gösterildiği gibi üç grup faktör altında incelenmiştir: 1) travma öncesi

etkenler olarak kişisel geçmiş, kişilik, önceki yaşanan travmalar, 2) travmatik olaya ilişkin ve olay sırasındaki etkenler olarak olayla ne kadar yüzleşildiği, kayıplar, şiddet, olayın anlamı, 3) travma sonrası etkenler olarak da sosyal çevre-destek, baş etme stratejileridir.

Travma Sonrası Gelişim (TSG)

TSG, önemli yaşam olayları veya travmatik olaylar sonucu kişinin başa çıkma çabaları sonunda deneyimlenen olumlu psikolojik değişiklikler olarak tanımlanmaktadır (Calhoun ve Tedeschi, 1999; Tedeschi ve Calhoun, 1996). Bu değişikliklerin 5 farklı alanda yaşandığı savunulmaktadır. Bu olumlu yönde değişim alanlarının travmatik yaşantılar sonrası yeni olanakların algılanması, kişilerarası ilişkiler, bireysel güçlülük, manevi değişim ve yaşamın kıymetini anlama olduğu bulunmuştur (Taku vd., 2008).

Tedeschi ve Calhoun (2004), travma sonrası gelişim modelinde travma öncesi etmenler, travmatik yaşam olayı (sismik bir olay) ve yaşantısı ile ilgili özellikler, yarattığı stres ve travmatik olayın işlemlenmesi (ruminasyon) gibi bir süreç sonucu ortaya çıkan bir sonuç olarak açıklanmıştır. Ayrıca Schaefer ve Moos'un (1992) modeli'nde (Şekil 3) de önemli yaşam olayları-krizleri veya geçiş dönemlerinden sonra kişilerin olumlu dönüşümler yaşabileceği vurgulanmıştır.

Ruhsal travmatik olayın şiddeti ve TSSB ile, travma sonrası gelişim arasında olumlu bir ilişki bulunduğu pek çok çalışmada gösterilmiştir (Tedeschi & Calhoun, 1996; Morrill vd., 2008; Feder vd., 2008). Bireyler, aynı anda hem travma sonrası stres belirtilerini hem gelişimi yaşayabilmektedir.

Travma İle İlişkili Değişkenlerin Sonuçlara Olan Etkisi

Bu bölümde travmaya ilişkin değişkenler 3 başlık altında incelenecektir: Travma öncesi etkenler, Travmatik olaya ilişkin faktörler, Travmatik olay sonrası etkenler

Travma öncesi etkenler: Sosyo-demografik değişkenler, Kişilik özellikleri

Çeşitli kültürlerde yapılan çalışmalarda erkeklerin kadınlara göre daha fazla sayıda travmatik olaylarla karşılaştıkları saptanmıştır (Williams vd., 2007). Travmatik olaylarla yaşam boyu karşılaşma oranları erkekler için %61 ve %83

arasında değişirken, aynı oranlar kadınlar için %51 ve %74 arasındadır (Breslau vd., 1997).

Kadınlarda en yaygın olarak yaşanılan travmatik olay, çocuk ve yetişkinlik döneminde cinsel saldırıya maruz kalma ve eş şiddeti olarak bulunurken, erkeklerin en yaygın olarak maruz kaldıkları travmatik olayların motorlu taşıt kazaları ve dövüş/çatışma (Flett vd., 2004) ve bunları takiben travmatik yas, başkalarının öldürülmesine ya da yaralanmasına şahit olmak, yaşamı tehdit eden kaza, fiziksel saldırı, silah içeren fiziksel saldırılar, silahsız fiziksel saldırılar, işkence-terör, ve diğer yoğun stres içeren olaylar olduğu bulunmuştur (Norris vd., 2003; Bernat vd., 1998; Williams vd., 2007).

Ayrıca travmatik yaşantıların, gençlerde yaşlılardan daha yaygın olarak yaşandığı bulunmuştur (Frans vd., 2005). Travmatik olaya maruz kalma risk etmenlerinden diğerleri ise; çocukluk çağı sorunları, ailede psikiyatrik hastalık öyküsü, kişilik özellikleri (nevrotizm ve dışa dönüklük), yaşanılan travmatik deneyimler, major depresyon öyküsü, şehirde yaşıyor olmak ve düşük eğitim seviyesi olarak özetlenebilir. Evli olmak, düşük eğitim seviyesi ve genç olmanın TSG ile ilgili pozitif ilişkili olduğuna dair bir fikir birliğine ulaşılmış gibi görünse de (Bellizzi & Blank, 2006), pek çok başka çalışma da çelişkili sonuçlar bulmuştur. Türkiye'de yetişkin toplum örnekleminde yapılan çalışmada, travmaya maruz kalmak ve TSSB'ye yol açan risk faktörleri olarak kadın olmak, düşük eğitim ve gelir düzeyi, orta yaşta olmak bulunmuştur. Genç olmak, düşük eğitim ve gelir düzeyi, evli olmak ise TSG ile ilişkili bulunmuştur. Başka çalışmalar ise kadın ve yaşlı olmanın, düşük eğitim ve gelir düzeyinin, geçmiş psikiyatrik bozukluğun varlığının, kişinin travma yaşanırken verdiği tepkinin, başetme stratejilerinin TSSB ile ilişkili olduğunu göstermektedir (Norris, vd., 2003; Sümer vd., 2005; Perkoning vd., 2000; Ullman & Siegel, 1994; Denson vd., 2007; Breslau vd., 1991).

Travma sonrası stres belirtileri ve travma sonrası olumsuz etkilerle tutarlı bir şekilde ilişkili bulunan kişilik özelliği duygusal tutarsızlık/ nörotisizm'dir (Karancı vd., 2009; Evers vd., 2001; Tedeschi & Calhoun, 1996; Val & Linley 2006). Duygusal tutarsızlık tek başına veya içe dönüklük ile birlikte travma sonrası stres şiddeti ile ilişkili olduğu bulunmuştur (Evers vd., 2001; Val & Linley, 2006; Cox vd., 2004; Emmelkamp, 2006). Ayrıca iyimserlik, dışadönüklük, gelişime açıklık gibi

kişilik özelliklerinin, gelişime daha çok yol açan kişisel farklılıklar olduğu bulunmuştur (Affleck & Tennen, 1996; Curbow vd., 1993; Val & Linley, 2006; Tedeschi & Calhoun, 1996).

Travmatik olaya ilişkin faktörler: Travmatik olay türü, zamanı, belirti şiddeti

Daha önceki bulgular, yaşanılan travmatik olayın türüne göre sonuçların farklılık gösterdiğini işaret etmiştir. Flett ve diğerlerinin (2004) Yeni Zelanda'da yetişkinlerle yürüttüğü bir çalışmada en yaygın travmatik olayın yakın bir arkadaşın ya da bir akrabanın beklenmedik ölümü olduğu bulunmuştur. Üniversite öğrencileriyle yapılan bir başka çalışmada ise doğal afetler, ciddi kazalar ve başkalarının yaralanmasına ya da ölümüne şahit olmak en yaygın olarak rapor edilen travmatik olaylar olarak bulunmuştur (Bernat vd., 1998). Türkiye'de yapılan araştırmada kazalar, doğal afetler ve beklenmedik sevilen birinin ölümünün en yaygın olarak yaşandığı rapor edilmiştir. Ölüm veya kronik bir hastalık yaşamanın ise TSSB için en yüksek risk faktörü olduğu görülmüştür (Karancı vd., 2009).

Yapılan çalışmalarda TSSB yaşama sıklığının tecavüzden sonra %55, çocukluk çağı istismarından sonra %35, kanser sonrası %19, saldırı sonrası %17, ciddi kazalardan sonra %7 olarak bulunmuştur (Kessler vd., 1995; Maercker vd., 2004; Kangas, Henry, Bryant, 2002; Mehnert & Koch, 2007). İnsan eliyle/kasti yapılan olayların (işkence, taciz, şiddet gibi) daha çok TSSB ile ilişkili olduğu bulunurken, daha doğal ve çoğunlukla yaygın olarak yaşanan/kabul gören olaylar doğal afetler (e.g., Cieslak vd., 2009; Karanci & Acarturk, 2005, Karancı vd., 2012), kazalar (e.g., Nishi, Matsuoka, & Kim, 2010; Shakespeare-Finch & Armstrong, 2010) ve sevilen birinin kaybı (Davis, Michael, & Vernberg, 2007; Taku vd., 2008; Karancı vd., 2012) daha çok TSG ile ilişkili olduğu bulunmuştur. Herhangi bir travmatik olayı takiben ergenlerde en sıklıkla görülen gelişme alanı ise hayatın kıymetini daha çok anlamak olarak bulunmuştur. Zamanın etkisi ile ilgili olarak Mayou, Ehlers, & Bryant (2002) tarafından yapılan çalışmada, motorlu taşıt kazasından üç yıl sonra, katılımcıların %11'inin hala TSSB belirtilerini yaşadığı bulunmuştur. Travmatik olay sırasında yaşanan stres düzeyi ve şiddeti bu olay sonrasındaki sonuçları belirleyen önemli bir faktör olduğuna dair pek çok çalışma yapılmıştır.

Travmatik Olay Sonrası Etkenler: Başa çıkma, Ruminasyon, Sosyal destek

Olaydan çok insanların travmatik olayla baş etme yollarının, travma sonrası sonuçların olumlu ya da olumsuz olmasını belirlediği konusunda pek çok araştırmacı fikir birliğine varmıştır (Aldwin ve Levenson, 2004). Başa çıkma stratejileri farklı kategorilendirilmesine rağmen, genel olarak problem-odaklı, duygu-odaklı başa çıkma ve kaçınma olarak incelenmiştir. Yapılan çalışmalarda, problem-odaklı baş etme yolunu tercih edenlerin olumlu sonuçlarla ilişkili; kaçınma ve duygu-odaklı baş etmenin ise olumlu sonuçlarla negatif ilişkili olduğu bulunmuştur (Aldwin, vd., 1996; Moos & Schaefer, 1993; Mason vd., 2006).

Bazı çalışmalarda, sosyal destek ile TSG arasında pozitif ilişki olduğu bulunmuştur (Cadell, Regehr, & Hemsworth, 2003; Weiss, 2004a). Sosyal destek türlerine bakıldığında ise sadece arkadaşlardan alınan sosyal desteğin TSG ile anlamlı olarak ilişkili olduğu bulunmuştur (Lev-Wiesel, & Amir, 2003). Sosyal destek ve problem odaklı başa çıkma mekanizması, TSSB için koruyucu faktörlerden olduğu (Haden vd., 2007; Clapp ve Beck, 2009) ve Türkiye'de yapılan bir çalışmada da TSG'nin, sosyal destek ve problem odaklı başa çıkma mekanizmalarıyla pozitif ilişkili olduğunu saptamıştır (Karancı ve Erkam, 2007). Algılanan sosyal destek azlığı, TSSB'yi yordamaktadır (Johansen vd., 2007). Bu açıdan sosyal desteğin travma etkilerini azaltıcı ve koruyucu bir görev üstlendiği çeşitli çalışmalarda görülmüştür (Bonanno vd., 2007).

Ruminasyon, kişinin yaşadığı travmatik olay ve sıkıntısı ile ilgili belirtilere, olası meydana gelme sebeplerine ve sonuçlarına tekrar tekrar odaklanması, düşünmesi olarak tanımlanabilir (Nolen-Hoeksema, Wisco, Lyubomirsky, 2008). Ruminasyonun TSSB şiddeti ile ilişkili olduğu düşünülen özelliklerin, ruminasyona devam etme saplantısı, üretken olmayan düşüncelerin ortaya çıkması, 'neden' ve 'ya..olsaydı-nasıl olurdu' tarzı sorular, ruminasyon öncesi ve sonrası yaşanan olumsuz duygular, olduğu savunulmuştur. Tedeschi ve Calhoun (2004), 'isteyerek-bilinçli' olarak anlam çıkarabilmek için travmatik olay hakkında düşünmeye bilişsel işlemleme veya ruminasyon demektedir. Cann vd. (2011) ruminasyonu 'tekrarlayıcı düşünce, bilgileri birleştirerek üzerine derin düşünmek' olarak tanımlamış, ve ruminasyonun her zaman olumsuz sonuçlarla bitmediğini vurgulamışlardır. İstemli

ruminasyon, 'Bu benim geleceğim için ne anlama geliyor? Bu dünyaya bakışımı nasıl etkiledi?' gibi sorular sormasına ve bireyin travmatik yaşantısını yönetmesine ve anlamasına (Tedeschi & Calhoun, 1995) yardım eder. Travmatik olaya ilişkin ruminasyon 2 basamağa ayrılmıştır. İlki 'otomatik', istemsiz olarak kişinin aklına gelen ve olayın hemen ardından, beklenmedik zamanlarda gelen ruminasyon türüdür. İkincisi ise, daha bilinçli, 'istemli' başlatılıp sürdürülen, çabanın ve zamanın gerekli olduğu ruminasyondur. Bu istemli ruminasyonun, yaşanılan olayı işlemlemeye yarayan ve anlam arayışını destekleyen, dolayısıyla TSG'ye yol açan ruminasyon türü olduğu iddia edilmiştir.

Çalışmanın Amacı ve Kapsamı

Bu çalışmada İzmir'de yaşayan yetişkinlerin yaşam boyu karşılaştıkları tüm travmatik olaylar ve bu olaylardan onları en çok etkileyen olayla ilgili bilgi toplanmıştır. En çok etkilenilen olayın DSM-IV-TR travmatik olay (A) (APA, 2001) kriterini karşılayıp karşılamadığı değerlendirilmiş ve bu kritere uyan olayın rapor eden katılımcılarda olası Travma Sonrası Stres Bozukluğu'nun (TSSB) yaygınlığı araştırılmıştır. Ayrıca, TSS belirti şiddeti ve Travma sonrası gelişim (TSG) düzeyleri ve bunlarla ilişkili olabilecek sosyo-demografik, olayla ilgili özellikler, kişilik özellikleri, başetme yolları, ruminasyon türü, algılanan sosyal destek incelenmiştir. Aynı örneklem grubundan hem travma sonrası stres hem de TSG ile ilgili bilgi toplandığı için travmanın olumsuz ve olumlu sonuçlarını yordayan değişkenler incelenebilmiştir. Ayrıca, bu faktörlere bir bütün olarak bakıp değerlendirebilmek için bir model önerilmiştir. Bu model, Parkinson (2000) modelinin ana hatlarını alarak, Schaefer ve Moos'un (1992) modeli ve Tedeschi ve Calhoun'un (2004) modelindeki faktörlerin de bir araya getirilmesi ile oluşturulmuştur. Özetle, bu çalışmanın iki temel amacı vardır. Birincisi, İzmir'de yaşanan travmatik olayların çeşitliliğini, olası TSSB ve yaygınlığını araştırmak, ikincisi ise TSS belirti şiddeti ve TSG'nin yordayıcılarını daha kapsamlı bir model çerçevesinde araştırmaktır.

2. YÖNTEM

Örneklem

İzmir'de yaşayan toplam 740 yetişkin araştırmaya katılmıştır. Bu katılımcıların, 476'sı kadın (%64.3), 264'ü erkek (%35.7), yaş ortalaması ise 43.2 (Ss=15.2) ve yaş aralığı 18-85'tir. Katılımcılardan 508'i (%68.6) evli, 251'i (%33.9)

ilkokul, 199'u (%26.9) lise, ve 128'i (%17.3) üniversite mezunudur. Örneklem 242 (%32.7) çalışan, 498 (%67.3) çalışmayan kişilerden oluşmaktadır. 476 kadın katılımcıdan 230'u (%47.1) ev hanımıdır. Katılımcıların 416'sı (%56.2) eve giren aylık gelir düzeylerini orta-düzey olarak rapor etmişlerdir. 109 katılımcı (%14.7) sağlık sigortasına sahip olmadıklarını bildirmişlerdir. Ayrıca, 104 katılımcı (%14.1) son iki yıl içerisinde yaşadıkları ruhsal rahatsızlık olduğunu, ve 83'ü (%11.2) tedavi gördüğünü, 49'u (%6.6) ise halen tedaviye devam ettiklerini belirtmişlerdir.

Veri Toplama Araçları

Veriler, standardize öz-değerlendirme araçları aracılığıyla toplanmıştır. Araştırma kitapçığı sosyodemografik veri formu dışında Travma Sonrası Stres Tanı Ölçeği, Olaya ilişkin Ruminasyon Envanteri, Travma Sonrası Gelişim Envanteri, Temel Kişilik Özellikleri Envanteri, Başa çıkma Yolları Ölçeği, Çok Boyutlu Algılanan Sosyal Destek Ölçeği'ni içermektedir.

Demografik Veri Formu

Bu form, katılımcılarının demografik özelliklerini (yaş, cinsiyet, eğitim durumu, medeni durum, gelir düzeyi), çalışma durumlarını (çalışmama nedeni, işteki konumu, sahip olduğu sağlık sigortası), daha önce tedavi gerektiren ruhsal rahatsızlıklarının olup olmadığını (varsa tedavi türü ve devam eden tedavi) belirlemek amacıyla Demografik Bilgi Formu kullanılmıştır.

Travma Sonrası Stres Tanı Ölçeği (PDS)

Elli maddeden oluşan ve kendini değerlendirme (self-report) biçiminde olan Travma Sonrası Stres Tanı Ölçeği (PDS) travma sonrası stres bozukluğunu belirlemek amacıyla geliştirilmiştir (Foa, Cashman, Jaycox, ve Perry, 1997). Ölçeğin Türkçe'ye uyarlama çalışması Işıklı (2006) tarafından yürütülmüştür. Bu çalışmada, Travma Sonrası Stres Tanı Ölçeği yaşanan travmatik olay türleri ve olaya bağlı yaşanan psikolojik sıkıntıların derecesi, travma sonrası belirti şiddetini (TSS belirti şiddeti) arttırıcı/ azaltıcı etkileri ve olası TSSB tanısı alabilecek bireylerin yaygınlığını değerlendirebilmek amacıyla kullanılmıştır. Üç faktör, bu örneklemde varyansın %55.8'ini açıklamıştır. 17 maddeden oluşan TSS belirti şiddetinin iç tutarlılığı .91 olarak bulunmuş, yeniden yaşama, kaçınma, irkilme belirtilerinden oluşan 3 faktörün ise sırasıyla .82, .79, .86 Cronbach alfa değerlerine sahip olduğu görülmüştür.

Olaya İlişkin Ruminasyon Envanteri (ERRI)

Travma sonrası bilişsel işlemlemeyi kapsayan 2 ruminasyon biçimini (intrusif/otomatik ve istemli) değerlendirmek amacıyla oluşturulmuş, 20 maddelik bir ölçektir (Cann vd., 2011). İki bölümden oluşan ölçekte, katılımcılardan travmatik olayın hemen sonrasındaki birkaç haftada olabilen otomatik düşünceleri derecelendirmeleri ve istemli olarak travmatik olayı düşünmeye ayırdıkları zamanı değerlendirmeleri istenir. Bu ölçeğin Türkçe'ye çevirisi ve geçerlilik güvenirlik çalışması Calisir vd. tarafından (devam etmekte) yapılmıştır. Bu çalışmada, ERRI, özellikle bu iki tür ruminasyonun travma sonrası sonuçlara olan olası etkilerini araştırmak için kullanılmıştır, iki faktör yapısı yüksek iç tutarlılık katsayılarına sahip olduğu söylenebilir; intrusif ruminasyon .93, istemli ruminasyon ise .87.

Travma Sonrası Gelişim Ölçeği (PTGI)

Yirmi bir maddeden oluşan bu ölçek travmatik yaşantılar sonrası bireylerde görülebilecek olumlu gelişim/ dönüşümleri değerlendirmek üzere Tedeschi ve Calhoun (1996) tarafından geliştirilmiştir. Bu ölçek, Dirik (2006) tarafından Kılıç (2005) çevirisi de göz önünde tutularak Türkçe'ye çevrilmiştir. Bu çalışmada travma sonrası oluşabilecek olumlu dönüşümleri değerlendirebilmek ve olumlu sonuçlara katkı sağlayan faktörleri araştırabilmek için kullanılmıştır. Dirik'in (2006) çevirisinin ve 5-faktör yapısının (Karanci vd., 2009) kullanılmasıyla iç tutarlılık katsayıları yeni olanakların algılanması alt boyutu için .80, kişilerarası ilişkiler için .77, yaşamın kıymetini anlama için .81, bireysel güçlülük için .72, manevi değişim için .76 , tüm ölçek içinse Cronbach alfa .91 bulunmuştur.

Temel Kişilik Özellikleri Ölçeği (BPTI)

Ölçek Türk Kültürü'nde değişik kişiliklerin tanımlanmasında sıklıkla kullanılan sıfatların belirlenmesi amacıyla Gençöz ve Öncül (2012) tarafından geliştirilmiştir. 45 maddeden oluşan ölçek, 6 alt ölçek içermektedir. Söz konusu ölçek bu araştırmada, kişilik özelliklerinin olası TSS belirti şiddetini ve travma sonrası gelişimi azaltıcı/ çoğaltıcı etkisini incelemek amacıyla kullanılmıştır. Ayrıca kişilik ile başetme stratejileri, ruminasyon tipi ve sosyal destek parametrelerinin birlikte TSS belirti şiddetine ve TSG'ye olan etkileri değerlendirilmiştir. Altı faktörün Cronbach alfa değerleri geçimlilik, sorumluluk, dışadönüklük, duygusal

tutarsızlık, olumsuz değerlik, gelişime açıklık için sırasıyla .81, .77, .79, .79, .69, .61 bulunmuştur. Tüm ölçeğin iç tutarlılık katsayısı ise .76 olarak hesaplanmıştır.

Başetme Yolları Ölçeği- Türk formu (WCI-T, belirtilen travmatik olaya yönelik)

Folkman ve Lazarus (1985) tarafından çeşitli baş etme stillerini ölçmek amacıyla geliştirilen ölçek 74 maddeden oluşmaktadır. Türkçe'ye adaptasyonu Siva (1991) tarafından yapılmıştır ve iç tutarlılık katsayısı .91 olarak bulunmuştur. Bu çalışmada 42 maddelik Türk formu (WCI-T), kişilerin yaşadıkları travmatik olayların ardından kullandıkları baş etme yollarını belirlemek, TSS belirti şiddeti ve TSG'ye etkilerini araştırmak amacıyla kullanılmış, dört-faktör çözümüyle Faktör analizi yapılmıştır. Dört-faktör çözümü, 'kaderci' (α = .86), 'destek arayıcı' (α = .72), 'problem çözme' (α = .77), ve 'çaresizlik' (α = .75) varyansın %36.75'ini açıklamıştır. Tüm ölçeğin iç tutarlılık katsayısı ise .86 olarak bulunmuştur.

Çok Boyutlu Algılanan Sosyal Destek Ölçeği (MSPSS)

Zimet, Dahlen, Zimet, ve Forley tarafından (1988) geliştirilen ölçek, 12 maddeden oluşmaktadır. Ölçeğin Türkçe'ye adaptasyonu Eker ve Arkar (1995), daha sonra Eker, Arkar ve Yaldız (2000) tarafından yapılmıştır. Bu araştırmada, bu ölçek travma sonrasında kişilerin algıladıkları sosyal destek düzeylerini incelemek, TSS belirti şiddeti ve TSG'ye etkilerini araştırmak amacıyla kullanılmıştır. İç tutarlılık değerlerine bakıldığında, bu örneklemde Cronbach alfa değerleri algılanan sosyal destek sırasıyla arkadaştan .90, aileden .90, önemli diğer kişiden .89 olarak, tüm ölçek içinse .90 olarak bulunmuştur.

İşlem

Öncelikle İzmir'den temsili tesadüfi örneklem için Türkiye İstatistik Kurumu'na (TÜİK) başvurulmuştur. Araştırma amaçlarından biri travmatik yaşam olayları yaygınlığını tespit etmek olduğundan, örneklem büyüklüğü de TÜİK tarafından hesaplanmıştır. TÜİK, anket uygulanan 740 haneyi, 2007 yılında tamamlanan Adrese Dayalı Kayıt Sistemine (ADNKS) altlık oluşturan Ulusal Adres Veri Tabanı'nı kullanarak tespit etmiştir.

Öncelikle, İzmir Valiliği'nden gerekli izin yazılarının alınmasının ardından, anketör ekip kurulmuş ve ev ziyaretleri yoluyla verilerin toplanması gerçekleşmiştir. Hane halkından bir kişi Kish yöntemi ile seçilmiş, uygulama öncesinde kişiye valilik

izninin bir örneği ile araştırmanın amacını açıklayan ve proje yürütücüsü tarafından imzalanmış olan bir yazı sunularak, kimliklerinin gizli kalacağı ve gönüllülüğün esas alındığını belirtilmiştir. Gönüllü katılım formu imzalatılmış ve görüşmeler yaklaşık 30-45 dakikalık süre içerisinde tamamlanmıştır. Her katılımcıya, tüm uygulama bittikten sonra çalışma hakkında daha detaylı bilgilerin yer aldığı 'Katılım sonrası bilgi formu' verilmiştir.

Veri Analizi

İstatistiksel analizler SPSS 17 ve LISREL 8.80 programları kullanılarak yürütülmüştür. Olay türlerinin ve cinsiyet farklılıklarının etkilerini görebilmek açısından katılımcıların yanıtları, en fazla rahatsız eden olay (ETO), ruhsal olarak travmatik (Kriter A'yı karşılayan) olay (RTO), olası TSSB kriterlerine uyanlara göre karşılaştırılmıştır. Farklı olay türleri ve cinsiyet farklarını karşılaştırabilmek için Ki-kare analizleri kullanılmıştır. Sosyodemografik değişkenlerin olası TSSB ile ilişkisini değerlendirebilmek için Lojistik regresyon analizi yürütülmüştür. Daha sonra 13 olay türü dört grup olay türü altında toplanmıştır; (1) kasıt/saldırı içeren şiddet, (2) yaralanma/şok edici olay, (3) beklenmedik/ani ölüm, (4) diğer olaylar. Bu dört olay grubunun üç travma sonrası stres belirtisi ve travma sonrası gelişim beş alt boyutu açısından farklılaşıp farklılaşmadığını değerlendirebilmek için çok yönlü varyans analizi (MANOVA) yürütülmüştür. Daha sonra, TSS belirti şiddeti ve TSG'yi yordayan değişkenleri araştırabilmek için iki ayrı hiyerarşik çoklu regresyon analizi yürütülmüştür. Son olarak, bu çalışmada önerilen modelin test edilebilmesi ve belirti şiddeti ve travma sonrası gelişim gibi farklı sonuçlara yol açan değişkenler arası doğrudan/dolaylı ilişkilerin incelenebilmesi için yapısal eşitlik modeli (YEM) kullanılmıştır. Benzer şekilde, iki sonuç değişkeni (belirti şiddeti ve TSG) arasındaki ilişkiyi anlayabilmek için başka bir model test edilmiştir.

3. BULGULAR

Travmatik Yaşam Olayları ve Travma Sonrası Stres Bozukluğu Yaygınlığı

Bu çalışmada DSM-IV TSSB tanı ölçütlerinden A ölçütünü karşılayan kişilerin yaşadıkları travmatik olaylar "Ruhsal Travmatik Olay" (RTO), yaşandığı belirtilen ancak DSM-IV A ölçütünü karşılamayan olaylar sadece "Travmatik Olay"

(TO) ve en çok etkileyen olay olarak seçilen olay ise "En Çok Etkileyen Travmatik Olay" (ETO) olarak tanımlanmıştır.

Tüm örneklemde 498 kişi (%67.3) hayatı boyunca en az bir travmatik olay (TO) yaşadığını bildirmiştir. Tüm örneklem için en sık yaşanılan (%73) TO beklenmedik ölümdür. Tanımadığı biri tarafından fiziksel bir saldırıya maruz kalmak, erkek ve kadın örneklemde farklılaşmıştır. Ayrıca, askeri bir çarpışma ya da savaş alanında bulunma, hapsedilme ve işkenceye maruz kalma olay türlerinde, kadın ve erkek örneklemde görünen farklar anlamlıdır.

Yaşam boyu karşılaşılan TO'lardan kişiyi en fazla etkileyeni sevilen ya da yakın birinin beklenmedik ölümüdür (%51.6). Bunu sırasıyla diğer olaylar (%14.1) ve hayatı tehdit eden bir hastalık (11.8), ciddi bir kaza, yangın ya da patlama olayı (%8.4) takip etmektedir. Bu olaylardan beklenmedik ölüm, kadın ve erkek örneklemde anlamlı düzeyde farklılaşmıştır.

Kendilerini en fazla etkileyen bir yaşantı işaretleyen 498 katılımcının 233'si (%46.8'i) DSM-IV'te belirtilen TSSB tanı ölçütlerinden A'yı karşılamaktadır. Tüm örneklem için RTO yaşama yaygınlığı %31.5'tir. Ciddi bir kaza, Aile üyelerinden biri ya da tanıdığınız bir kişi tarafından fiziksel bir saldırıya maruz kalmak, ve Hayatı tehdit eden bir hastalık olaylarının daha fazla RTO olma yönündeki fark anlamlıdır. Ayrıca, beklenmedik ölüm ve diğer olayların daha az RTO olma yönündeki fark anlamlıdır.

DSM-IV ölçütlerine göre RTO yaşayan, yani A ölçütünü karşılayan 233 kişiden 80'i (%34.3'ü ve tüm örneklemin %10.8'i) tanı sisteminde belirtilen B, C, D, E ve F ölçütlerini karşılamaktadır. Bu olaylardan sadece beklenmedik ölüm olayının, olası TSSB'ye yol açıp açmama açısından farklılığın istatistiki olarak anlamlı olduğu bulunmuştur.

Regresyon analizi sonucuna göre, ruhsal rahatsızlık, düşük gelir düzeyi, genç yaş, düşük eğitim düzeyi olası TSSB ihtimalini yükseltmektedir.

Travma Sonrası Stres Belirti Şiddetinin Yordanması

Bu model ile yapılan ilk regresyon analizinde bağımlı değişken 'travma sonrası stres belirti şiddeti', bağımsız değişkenler ise 'kişilik özellikleri', 'travmatik olay ile ilgili değişkenler', 'travmatik olay sonrası değişkenler'dir. Birinci adımda, enter metoduyla, kontrol değişkeni olarak atanan demografik değişkenlerin katkısı

çıkarıldıktan sonra ikinci adımda (stepwise methoduyla) kişilik özellikleri, üçüncü adımda (stepwise methoduyla) olayla ilgili değişkenler, son basamakta ise (stepwise methoduyla) travma sonrası değişkenler analize sokularak, Hiyerarşik Regresyon Analizi yürütülmüştür.

Analiz sonucunda, tüm değişkenlerin girildiği son basamakta , genç olma, kadın olma, düşük gelir durumunun, yüksek duygusal tutarsızlığın, yüksek engellenme düzeyinin, belirtilerin devam etmesinin, beklenmedik ölüm olayına kıyasla kasıt/saldırı içeren şiddet olay grubunun, olay zamanının yakın olması, intrusif/otomatik ruminasyon, istemli ruminasyon ve kaderci başetme yolunun yüksek olması daha fazla travma sonrası stres belirti şiddetini yordadığı bulunmuştur.

Travma Sonrası Gelişim'in Yordanması

Son basamakta, genç olma, düşük eğitim durumunun, sorumluluk kişilik özelliğinin, beklenmedik ölüm olay grubuna kıyasla yaralanma/şok edici olay türünün, uzun belirti süresinin, istemli ruminasyonun, problem-odaklı baş etme yollarının, sosyal destek arayıcı baş etme yollarının, arkadaştan ve diğerlerinden algılanan sosyal desteğin anlamlı düzeyde TSG'yi yordadığı bulunmuştur.

Model Testi

Bu çalışmada önerilen model, LISREL 8.8 kullanılarak Yapısal Eşitlik Modeli (YEM) ile test edilmiştir. Bu modelde yer alan temel değişkenler şu şekilde sıralanabilir; Kişilik özellikleri, Olaya ilişkin faktörler, Algılanan sosyal destek, Olaya ilişkin ruminasyon, Baş etme yolları, Travma Sonrası Belirti (TSS) Şiddeti, Travma Sonrası Gelişim (TSG). Bu çalışmadan elde edilen veri ile model test edildiğinde, modelin verilere iyi uyum sağladığı istatistiki olarak görülmektedir; χ^2 (1131, N = 498) = 2476.92, $p < .001$, (χ^2/ *sd* = 2.19); RMSEA = .049 (C.I. 0.046-0.052), NNFI = .96, CFI =.96.

Yüksek nevrotizmin rapor edilen olay şiddetini, İntrusif ruminasyonu, ve Duygu-odaklı başa çıkma yollarını arttırdığı görülürken, Diğer-kişilik özelliklerinin anlamlı düzeyde İstemli ruminasyonu, ve Aktif başa çıkma yollarını arttırdığı bulunmuştur. Rapor edilen olay şiddetinin artması anlamlı düzeyde İntrusif ruminasyonu, ve İstemli ruminasyonu arttırdığı görülmüştür. İstemli ruminasyonun kullanılması anlamlı düzeyde TSG düzeyini arttırdığı, hem istemli ruminasyonun hem de intrusif ruminasyonun kullanılmasının ise Belirti şiddetini arttırdığı

görülmüştür. Bunlara ek olarak, intrusif ruminasyonun daha çok Duygu-odaklı başa çıkma, İstemli ruminasyonun ise daha çok Aktif başa çıkma ile ilişkili olduğu bulunmuştur. Algılanan sosyal desteğin yüksek olması Aktif başa çıkma yollarına başvurmayı arttırdığına işaret etmektedir. Aktif başa çıkma yollarının kullanılmasının TSG'yi arttırırken, Belirti şiddetini düşüreceğini, Duygu-odaklı başa çıkmanın ise Belirti şiddetini arttıcağını göstermektedir.

Araştırma sonuçları, nevrotizmin daha fazla duygu-odaklı başa çıkma yolunu kullanmaya neden olduğunu ve bunun da belirti şiddetini arttırdığını göstermektedir. Bir başka yol ise, yüksek nevrotizm düzeyinin rapor edilen olay-şiddetini arttırdığını, bunun da ruminasyonu (intrusif ve/veya istemli ruminasyonu) arttırdığını, ve dolayısıyla daha yüksek belirti şiddeti yaşanmasına sebep olduğunu göstermektedir. Ancak, ilginç bir şekilde bulgular nevrotizm'in olumlu sonuçlara (TSG'ye) da istemli ruminasyon üzerinden varılabileceğini göstermektedir. Nevrotizm'in TSG'ye dolaylı etkisinin anlamlı olduğu, nevrotizmin travma sonrası gelişime yüksek olay-şiddeti ve/veya intrusif ruminasyon üzerinden daha fazla istemli ruminasyon aracılığıyla ulaşılabileceği modelde görülmektedir. Bir diğer ilginç sonuç gösteriyor ki, istemli ruminasyonun Aktif başa çıkma üzerinden TSG'ye dolaylı etkisi istatistiki olarak anlamlıyken, istemli ruminasyonun Aktif başa çıkma üzerinden belirti şiddetine dolaylı etkisi istatistiki olarak anlamlı değildir.

Bunların dışında, İntrusif ruminasyon duygu-odaklı başa çıkma aracılığıyla belirti şiddetini arttırırken, İstemli ruminasyon Aktif başa çıkma aracılığıyla TSG düzeylerini arttırmaktadır. Diğer kişilik özelliklerinin (dışadönüklük, gelişime açıklık vb.), istemli ruminasyon aracılığıyla veya istemli ruminasyon ve Aktif başa çıkma yolları aracılığıyla daha fazla TSG gösterdiği görülmektedir. Ancak, Diğer-kişilik özelliklerinin Belirti şiddeti üzerindeki dolaylı etkisinin istemli ruminasyon ve/veya Aktif başa çıkma aracılığıyla, istatistiki olarak anlamlı olmadığını göstermektedir.

Yüksek sosyal destek algısının Aktif başa çıkma yollarının kullanılmasını arttırarak, Travma sonrası gelişim düzeylerini arttırdığı ve belirti şiddetini azalttığı bulunmuştur. Sonuç olarak, Belirti şiddeti'ndeki varyansın %52'si ve TSG'deki varyansın %45'i model tarafından açıklanmıştır.

Belirti şiddeti ve TSG arasındaki ilişkiyi test edebilmek için daha basit bir model oluşturulmuştur. Bu model istatistiki olarak anlamlı Ki-kare değeri ile veriye

iyi fit etmiş olduğu görülmektedir, χ^2 (355, N = 498) = 717.51, $p < .001$, (χ^2/sd = 2.02); RMSEA = .045 (C.I. 0.041-0.050), NNFI = .98, CFI =.98. Belirti şiddeti ile TSG arasında pozitif bir ilişki olduğu varsayılmış olsa da, bulgular anlamlı ancak negatif yönde bir ilişkinin varolduğunu göstermektedir. Zayıf bir ilişki olmasına rağmen, bu doğrudan ilişki gösteriyor ki belirti şiddeti azaldıkça TSG düzeyleri artmaktadır.

4. TARTIŞMA

Çalışma bulguları, ülke genelini temsili bir niteliği olmasa bile, Türkiye'de yaşanan en yaygın travmatik yaşantılar, bu yaşantıların en olumsuzları, ruhsal travmatik olaylar ve bu olayların travma sonrası stres bozukluğu ile ilişkileri konusunda önemli bilgiler sağlamıştır.

Travmatik Yaşam Olayları ve Ruhsal Travmatik Olayların Yaygınlığı

Bu çalışmanın sonuçları, TO, RTO, olası TSSB oranları açısından daha önceki literatür bulgularının aralığında olduğunu göstermiştir. Tek tek olay türleri bazında yapılan karşılaştırmalarda, tanımadığı biri tarafından fiziksel bir saldırıya maruz kalmak, askeri bir çarpışma ya da savaş alanında bulunma, hapsedilme ve işkenceye maruz kalma olay türlerinde erkek ve kadın örneklemde farklılaşmıştır. Ayrıca, olaylar arasında RTO niteliğinde olup olmama açısından istatistiki olarak anlamlı farklar bulunmuştur. Bulgular, yaralanma/şok edici ve kasıt/saldırı içeren şiddet grubu olaylarının daha sıklıkla RTO olarak yaşanmasına yol açarken, ölüm ve diğer tür olayların (örneğin boşanma, iflas vb) daha az sıklıkla RTO niteliği olduğunu göstermektedir. Diğer taraftan da, beklenmedik ölüm olayının, olası TSSB'ye daha az oranda yol açmakta olduğu görülmüştür. Olayların yaygınlık oranları ve cinsiyet farklılıkları ile ilgili sonuçlar bir arada değerlendirildiğinde, bazı tür olayların daha az bildirildiği bu nedenle istatistiki açıdan anlamlı farkların gözlenmediği düşünülmüştür. Örneğin, kasıt/saldırı içeren şiddet olay türlerinin böyle bir araştırma kapsamında anketörlere rapor edilmesinde güçlükler yaşanmış olabileceği düşünülmektedir. Katılımcı, ilk ve son kez karşılaştığı araştırmacıya, yaşadığı olayları paylaşmak konusunda zorluk çekmiş/paylaşmak istememiş olabilir. Bunun bir nedeni, araştırma yönteminin doğası gereği güven ilişkisinin kurulmasının zor olabileceğidir.

Regresyon analizi sonuçları düşük gelir düzeyi, genç yaş, düşük eğitim düzeyi, ruhsal rahatsızlığın olması, olası TSSB'yi arttığını ortaya koymuştur. Kadın ve erkek arasında, olası TSSB açısından da anlamlı bir farklılık bulunmamıştır. Ancak, kadın ve erkek arasında tanı anlamında bir fark olmaması, bu durumun travma sonrası stress (TSS) belirti düzeyleri açısından farklılar yaratabileceğini düşündürmüştür. Ayrıca, cinsiyete bağlı farklılıkların görülmemesinin bir başka nedeni de, olayın işlenme veya kullanılan başa çıkma stratejilerindeki farklılıklar olabilir. Buna ek olarak, bazı olay türlerinin cinsiyete bağlı olarak ifade edilme zorluğu sebebi ile, cinsiyete bağlı olarak eksik bildirim, dolayısıyla sonuçların karşılaştırılması ve analiz yapılmasına engel durumlar oluşturduğu söylenebilir.

Travma Sonrası Stres Belirti Şiddeti ile ilgili Faktörler

Bu çalışmada, duygusal tutarsızlığın yüksek belirti şiddetiyle en fazla ilişki gösteren kişilik özelliği olduğu saptanmıştır. Yüksek nevrotizm yapısı olan kişilerin travmatik olay sırasında yüksek şiddet algısı nedeniyle daha fazla etkilendiği (Löckenhoff vd., 2009) belirtilmiştir. Artan engellenme düzeyi (sosyal-evlilik-akademik-çalışma hayatı, eşi, arkadaşları, iş arkadaşları ile ilişkiler) ve belirtilerin uzun sürmesi yüksek belirti şiddeti ile ilişkili bulunmuştur. Bir varsayıma göre, stres belirtilerinin devam etmesi, kişinin işlevselliğinin bozulmasına (Mulder, Fergusson & Honvood, 2013) ve şiddet algısının da korunmasına sebebiyet vermektedir. Bu nedenle kişinin belirti şiddeti de artmaktadır. Travmatik olay üzerinden geçen süre arttıkça, belirti şiddetinin azaldığı görülmüştür. Mevcut çalışma, beklenmedik ölüme kıyasla kasıt/saldırı içeren şiddet grubu olayların belirti şiddeti ile pozitif ilişkili olduğunu göstermiştir. Kasıt/saldırı içeren şiddet grubunda yer alan olayların belirti şiddetini arttırma sebeplerinden biri, olayın doğası gereği, adaptif başa çıkma stratejilerinin kullanılma ve anlam bulma açısından yaşanan zorlukların da olaya eşlik ediyor olmasıdır. Aynı şekilde, bu tür olaylar sonrasında, olayı ve anıları ruminasyon yaparak, bastırarak veya kaçınarak olumsuz bir şekilde yorumlama da belirtilerin sürdürülmesine neden olabilmektedir (Mayou vd., 2002). Bu aşamada, olayın kendisinden ziyade, intrusif anılar ile ilgili bireyin kaynakları ve kapasitesi önem kazanmaktadır. Bu çalışmadan elde edilen bulgular, intrusif ruminasyon, istemli ruminasyon ve kaderci başetmenin de belirti şiddetini etkileyen önemli paydaşlar olduğunu ortaya koymuştur. Dini başa çıkmanın hem negatif hem pozitif

yönde iki taraflı ele alınabileceği varsayılmıştır. Bir tarafta, olumlu dini başa çıkmada, Tanrı ile sadakat ve güven sorgulanmayan bir ilişki kurularak, sorunlar Tanrının yardımı ile bağışlama, kabul etme ve kendi haline bırakma ile çözülmektedir. Öte yandan, olumsuz dini başa çıkmada Tanrı ile güvensiz bir ilişki söz konusudur ve stresli olaylar Tanrının bir cezası olarak yorumlanır. Bu çalışmanın bulguları, negatif dini başa çıkma ile daha fazla ilgili olduğu varsayılabilir. Ancak travma sonrası değerlendirmeler ve kadercilik-dini yolla başa çıkma üzerine daha derinlemesine görüşmeler yapılıp nitel analizlerle bu sonuca varmak doğru olabilir. Negatif dini başa çıkmada adaletsizlik düşünceleri, Tanrı'ya öfke duyguları ile travmatik olaylara ilişkin anlam bulmakta zorluklar yaşanabilir (Pargament vd., 1998), buna bağlı olarak da belirti şiddetinin arttığı söylenebilir.

Travma Sonrası Gelişim ile ilgili Faktörler

TSG'nin daha fazla, genç yaş ve düşük eğitim düzeyi ile ilişkili olduğu bulunmuştur. Açıklamalar çoğunlukla, travma sonrasında gençlerin yaşlılara göre daha kolay adapte olabileceği olasılığına yoğunlaşmıştır. Bu da temel inançların yaşlı insanlarda kolay değişmezken, genç insanlarda kırılabilir ve potansiyel olarak değişebilir olmasından kaynaklanabilmektedir (Calhoun vd., 1998). Başka bir açıklama ise, yaşlı insanların genel olarak daha uzlaşmacı, vicdani ve duygusal olarak daha istikrarlı olması sebebiyle olumlu değişikliklerin daha az belirgin olabileceğidir (Roberts & Mroczek, 2008). Bu çalışma bulguları, genç yaşın, yüksek belirti şiddeti ile de ilişkili olduğunu bulmuştur. Dolayısıyla, sadece genç yaşta olmaktan ziyade, kişinin başa çıkma becerileri, zihinsel süreçleri, kaynakları (sosyal destek, kişilik) gibi diğer faktörlerle de bir arada değerlendirildiğinde sonuçları değiştirebilmektedir. Bu çalışmada, sorumluluk kişilik özelliği, TSG ile pozitif ilişkili bulunmuştur. Bazı çalışmalar sorumluluk kişilik yapısının, hedefe ulaşmak için daha disiplinli ve istekli olma (Costa & McCrae, 1992), problemden kaçınmak yerine doğrudan üzerine gitme (Connor-Smith & Flachsbart, 2007) gibi özellikleri sebebiyle TSG ile ilişkili olduğunu (Tedeschi & Calhoun, 1996; Shakespeare-Finch, 2005; Karanci vd., 2012) savunmuştur. Bazı araştırmacılar, olay tipine bağlı bir ayrıma giderek, ölüm ve afet gibi 'doğal olarak' ortaya çıkan olaylar sonrasında yaşanan gelişimin, 'insan kaynaklı' şiddet ve saldırı olayları sonrasında yaşanan gelişimden daha fazla olduğunu ortaya koydular (Shakespeare-Finch & Armstrong,

2010; Ickovics ark., 2006). Bu çalışmada da, olay türü açısından yaralanma/sarsıcı olay grubu (beklenmedik ölüm olay grubuna kıyasla) ve belirtilerin süresi, gelişime daha fazla etki eden iki değişken olduğu bulunmuştur. Dolayısıyla bulgular, hayatı tehdit eden hastalık, doğal afet gibi nispeten daha doğal gerçekleşen olaylar sonrasında gelişimin, beklenmedik ölüm olayı sonrası gelişimden daha yüksek olduğu görüşünü desteklemiştir.

Bu çalışmanın sonuçları, travma sonrası istemli ruminasyon, problem çözme başa çıkma yöntemi ve destek arayışının TSG ile pozitif yönde ilişkili olduğunu göstermiştir. İstemli ruminasyon, olayın duygusal etkisini azaltarak, kişinin travmatik olayı yönetmesine (Tedeschi ve Calhoun, 1995; 2004), baş etme yolları bulmasına ve kişisel kaynaklarının yeterli olduğuna ikna olmasına yardımcı olmaktadır (Calhoun ve Tedeschi, 2006). Bu çalışmanın sonuçlarına göre, başa çıkmanın iki adaptif yolu, yani problem çözme ve destek arama başa çıkma yöntemleri gelişim ile yüksek ilişkili bulunmuştur. Her iki başetme yolu da çözüm için aktif arayış içerir. Problem odaklı başa çıkma doğrudan sorunu çözmek ya da bir durumu değiştirmeye çalışmak için bilinçli çabaları içerirken (Billings ve Moos, 1981; Folkman ve Lazarus, 1985; Moos ve Schaefer, 1993), destek arayışı başetme yöntemi daha çok stresli durumlarda tavsiye alma, eşlik edecek birisini arama, ya da duyguların ifadesi yaklaşımlarını içerir (Carver ve ark, 1989; Litman 2006).

Sosyal destek, travmadan kurtulmak için kullanılan baş etme yönteminin yapılandırılmasını etkileyen bir faktör olarak karşımıza çıkar (O'Brien & DeLongis, 1997) ve aktif destek, durumun daha kolay yönetilmesi ile ilgili çabaları etkileyebilir. Ayrıca, sosyal desteğin, olayı kontrol edilebilirlik algısını ve kendine güveni geliştirerek, olayı daha olumlu değerlendirmek ve aktif başa çıkma stratejilerinin seçimini kuvvetlendirmeye yardımcı olacağı savunulmaktadır (Schaefer ve Moos, 1998).

Model testi

Mevcut çalışmada, nevrotizmin üç doğrudan etkisi ortaya çıkmıştır. Buna göre yüksek düzey nevrotizm, olayın daha şiddetli algılanmasına sebep olup, daha fazla intrusif ruminasyona ve duygu odaklı başa çıkma yoluna sebep olacağı görülmüştür. Bu ilişkiler daha önceki literatür sonuçlarını destekler niteliktedir. Nevrotizm kişilik özelliği, duygusal dengesizlik, davranış tutarsızlığı, gelişmiş

fizyolojik uyarılma ile karakterize edilmiştir (McCrae & John, 1992), bu da çoğunlukla uyumsuz bilişsel süreçler (örneğin hüsnükuruntuyla gibi) ile uygunsuz başa çıkma stratejileri ile ilişkilendirilmiştir (Connor-Smith & Flachsbart, 2007). Bu kişiler, duygularını düzenlemede zorluk çekebilir, tehditleri genelleştirme/abartma eğiliminde ve artan tehlike ve çaresizlik duygularını da olumsuz yorumlanıyor olabilirler. Buna bağlı olarak, nevrotizmin algılanan olay şiddetini arttıracağı beklenmeyen bir bulgu değildir.

Ruminasyon, 'Neden?', 'Neden ben?', 'Öyle olmasa/olsa…ne olurdu?' gibi soyut sorular tekrar tekrar sorulduğunda duruma uyumsuzluk artar. Bu takıntıya-benzer sorgulama biçimi, kişinin olayın negatif sonuçlarına odaklanmasına neden olur, dolayısıyla somut çözümler üretmesini engeller (Watkins, 2008). Bu tip ruminasyonun (intrusif) travmatik olayla ilgili negatif duyguları arttırdığı ve problem çözme süreçlerini engellediği, böylece işlevselliğin bozulmasına ve daha fazla sıkıntıya yol açtığı gösterilmiştir. (Nolen-Hoeksema ve Morrow, 1991). İntrusif ruminasyon esnasında, birey kendini otomatik olarak olayı düşünürken bulur, bu da olayla ilgili konuları tekrar tekrar yaşama (TSSB bozukluğu) olasılığını arttırır. Bu nedenle, nevrotizm ve ruminasyon, ile nevrotizm ve uyumsuz başa çıkma, arasındaki pozitif ilişki çeşitli çalışmalarda ortaya konmuştur (Segerstrom vd., 2003). Stresli bir olayın kendisi ya da olayın travmatik olarak algılanması bireylerin temel becerilerini bozabilir. Birey travma sonucunda artan kontrol edilemezlik algısı ve çaresizlik duyguları ile kendini bunalmış hisseder, buna bağlı olarak bireyin başa çıkma yetenekleri bozulabilir. Dolayısıyla, nevrotizm, olay sonrası kaçınma, kendini suçlama ve geri çekilmeyi içeren duygu odaklı (çaresizlik ve kaderci) başa çıkma stratejileri ile ilişkili olduğu gösterilmiştir. Sonuç olarak, stresi yönetme yeteneği azalmış olduğundan, nevrotizm kişilik yapısının belirti şiddetini arttırıcı etkisi olduğu görülmektedir (Costa & McCrae, 1992).

İntrusif ruminasyonun, kişinin olay hakkında araştırma yapıp bir anlam bulmasına yardımcı olduğu ve istemli ruminasyona yol açacağı iddia edilmektedir (Tedeschi ve Calhoun, 2004; Cann vd., 2011). İntrusif ruminasyonun istemli ruminasyon üzerindeki etkisi, bu çalışmada da desteklenmiştir. Her ne kadar, Tedeschi ve Calhoun (2004), bilişsel işlemenin gelişimi teşvik etmesi için çaba ve zaman gerekli olduğunu ifade etmişlerse de, zamanla ruminasyon tiplerinin nasıl

değiştiği bu çalışmada test edilememiştir. Bu da intrusif ruminasyonun istemli ruminasyon aracılığıyla yüksek belirti şiddetine yol açmasının bir nedeni olabilir. Bu çalışmanın bulguları, ayrıca, travmatik bir olayın intrusif ve istemli ruminasyon tiplerini aktive ettiğini, nevrotizmin intrusif ruminasyon tiplerini tetiklerken, diğer kişilik özelliklerinin istemli ruminasyonu artırdığını göstermiştir. Bazı çalışmalar her ne kadar nevrotizmin bir olayın daha travmatik olarak algılanmasına yol açtığını belirtse de (Löckenhoff vd., 2009), kişilerin bu olaylarla başa çıkmak için gerekli kaynaklara sahip olabileceklerini bunun da TSG olasılığını arttıracağını göstermiştir (Merecz vd., 2012). Bir başka çalışma (Charlton ve Thompson, 1996) ise nevrotizmin, hem duygu-odaklı hem de beklenmedik şekilde problem odaklı başa çıkma ile daha ilgili olduğunu bildirmiştir. Mevcut çalışmada bu öneriyi test edilebilmiş ve sonuçlar, istemli ruminasyon ve/veya aktif başa çıkma yolları aracılığıyla, nevrotizmin TSG üzerinde önemli bir dolaylı etkisi olduğunu teyit etmiştir. Bu bulguyla, bu ilişkiyi anlamada önemli bir katkı sağlandığı düşünülmüştür.

Diğer kişilik özelliklerine sahip olanlar için, istemli ruminasyon belirti şiddetinin artışına yol açmamakta, aksine TSG seviyelerinde bir artışa yol açmaktadır. Diğer bir deyişle, diğer kişilik özelliklerine sahip olanlarda (yüksek dışa dönüklük, gelişime açıklık, geçimlilik, sorumluluk ya da daha düşük olumsuz değerlik olanlar) istemli ruminasyonun olumlu bir etkisi vardır. Ancak, diğer kişilik özelliklerinin, hatta aktif başa çıkma stratejileri (problem-odaklı başa çıkma, destek-arayıcı başa çıkma gibi) aracılığıyla da, travma sonrası stres belirtilerinin şiddet seviyelerini azaltmak için yeterli güce sahip olmadıkları, fakat aktif başa çıkma yollarının gelişimi yüksek düzeyde teşvik ettiği gösterilmiştir.

Bunun ötesinde, mevcut çalışmanın sonuçları, travma sonrasında algılanan sosyal desteğin aktif başetmeyi teşvik ettiğini, bunun da TSG düzeyini artırdığını göstermiştir. Özellikle, kolektivist kültürlerde, bireyler travma sonrasında çevrelerinden (aile, arkadaş, komşu) yararlanma fırsatına sahiptirler, bu da olaya ilişkin düşünce süreçleri ve duyguları paylaşabilir, olayı işlenebilir hale getirmektedir. Bu nedenle, algılanan sosyal destek ve destek-arayıcı başa çıkma yolu arasındaki eşleşmenin (destek talebi, öneri istemesi, yanında olma talebi) negatif sonuçları azaltırken pozitif değişikliklerin artmasında önemli olduğu görüşüne

varılabilir (Carver ve ark, 1989; Litman, 2006). Bir başka bulgu da, dışa dönüklük gibi diğer-kişilik faktörlerinin daha aktif başa çıkma yolları ile ilişkili olduğu (McCrae ve Costa, 1986) ve TSG'i teşvik ettiğidir. Başa çıkma stratejilerinin aynı zamanda kontrol edilebilirlik değerlendirmeleri ile ilişkili olduğu, bu durumda eğer olay istemli ruminasyon ile kontrol edilebilir/değiştirilebilir değerlendiriliyorsa, problem-odaklı başa çıkmaya eğilim olacağı bulunmuştur. Bu da, daha az sıkıntıyı/rahatsızlığı, daha fazla umut duygusunu ve TSG'e yol açmaktadır (Janoff-Bulman, 1979).

Bu çalışmanın sonucu, olayın daha şiddetli algılanmasının ve daha fazla intrusif ruminasyonun, duygu-odaklı başa çıkma'ya yol açtığı yolunu göstermesi açısından önemlidir. Bu çalışmanın bir başka bulgusu da, istemli ruminasyonun belirti şiddetini de arttırabileceğidir. Bunun, istemli ruminasyon sonrası, bireyin travmatik materyal ile sağlıklı baş etmeyi başaramadığı (örneğin, aktif başa çıkma yollarını kullanamadığı) durumda geçerli olabileceği varsayılmaktadır. Her ne kadar istemli ruminasyon bireyin olayı işlemesini ve bazı faydalar bulmasına rehberlik etmesini kolaylaştırsa da, birey bu aşamada "takılıp kalabilir" (Michael & Snyder, 2005). Bu nedenle, istemli ruminasyonun intrusif ruminasyon ile bir arada olması durumunda, gelişimden ziyade sıkıntıya yol açacağı düşünülmüştür. Dolayısıyla, bu çalışmadaki bulgu, bireyin yarar sağlama ya da anlam bulma çabaları ile boğulmuş, ve ileriye doğru hareket edemez olduğu, bu girişimlerin de belirtilerin şiddetini arttırdığı ve adaptif işlemeye engel olduğu anlamına gelebilir. Diğer bir deyişle, eğer birey olayı 'bitmemiş bir iş' (Beike & Wirth-Beaumont, 2005) gibi algılarsa, devamında anlam aramak için yapılan girişimler uyumsuz başa çıkma şeklinde sonuçlanabilir. Bu çalışmanın sonuçlarına göre, bilişsel işleme sonrasında bireyin olumlu sonuçlara ulaşmak için adaptif başa çıkma stratejileri aracılığıyla bazı somut davranışlar göstermesi gerektiği sonucuna varmak çok yanlış olmayacaktır (Hobfoll vd., 2007). Ayrıca, gelecekteki niteliksel çalışmalarda istemli ruminasyonun içeriğinin incelenmesi önemli ve ilginç olacaktır.

Bunların dışında bazı görüşler, bazı tehlikeli olayların bile fırsata yol açacağını ya da fırsat yaratacağını savunmaktadır. Olumsuz yaşam deneyimlerinin, hayatın bozulan dengesini yeniden sağlamak için bazı bireysel çabaların artmasına (Cadell vd., 2003), dolayısıyla yaşamda ilerleme, değişim ve gelişimin bir öncüsü

olabileceğini savunmaktadırlar. Tedeschi ve Calhoun (2004) ise, kendi modellerinde travmatik olaylar sonrasında, kaybı ve duyguları kabul edebilmek ve olayı işlemlemek gerektiğine, bu nedenle TSG için belli bir sürenin gerekli olduğuna işaret etmişlerdir. Ancak, gelişim sağlanabilmesi için, stres belirti şiddetinin azaltılması yerine orta seviyede muhafaza edilmesi gerekmektedir. Bu nedenle, yönetilebilir düzeyde sıkıntı, TSG'ye katkıda bulunmaktadır. Mevcut çalışmada, bu ilişki basit bir modelde ele alınmıştır. Belirti şiddeti ve TSG arasında pozitif bir ilişki öne sürülmüşse de, modelde negatif bir ilişki gözlenmiştir. Sonuçlar, belirti şiddeti azaldıkça, daha yüksek seviyede TSG sağlandığını ortaya koymuştur. Ancak bu sonuç, araştırma çalışmasının zamanlaması, yani travmanın ardından geçen zaman ile ilgili olabilir. Bir açıklama da, travmatik olaydan hemen sonra, insanların TSSB belirtileri ve TSG sergileyebileceğidir. Zaman içinde bu birliktelik travma sonrası stres belirti şiddetinin azalması ile değişebilir. Bu çalışmada regresyon analizi sonuçları geçen zamanla belirti şiddetinin azaldığını göstermiştir. Ancak, TSG ve belirti şiddeti arasındaki ilişkinin zaman içindeki değişimleri üzerinde odaklanmış boylamsal çalışmalara ihtiyaç vardır.

Çalışmanın Güçlü Yönleri ve Kısıtlılıklar

Farklı travmatik olayların ve olası TSSB'nin yaygınlığı, ve yaşanan olayın olumsuz ve olumlu sonuçlarına ilişkin aynı örneklem içinde yapılmış çalışmalar Türkiye'de pek yaygın değildir. Çalışmanın güçlü bir başka yönü de, geniş bir perspektifte değişkenler arasındaki çeşitli doğrudan ve dolaylı ilişkiler ile ilgili değerlendirmeler sunuyor olmasıdır. Değişkenlerin tek başına ve birarada katkıları aynı zamanda incelenmiştir. Ayrıca, TSS belirti şiddeti ve TSG arasındaki ilişki de aynı örneklem içinde incelenmiştir. Son olarak, olaya ilişkin ruminasyonun ve başa çıkma yollarının iki farklı sonuca (TSS belirti şiddeti ve TSG) aracılık eden rollerinin incelenmesinin değerli bir katkı sağladığı düşünülmüştür.

Bu çalışma, sınırlılıkları açısından değerlendirildiğinde veriler, hane ziyaretleri şeklinde ve tek seferlik uygulama yoluyla öz-değerlendirme araçları kullanarak toplandığından, travmatik bilgilerin paylaşımında ve katılımcıların kendini açmalarında zorluk yaşandığı söylenebilir. Bu nedenle, bazı olay tipleri (örn. cinsel/cinsel olmayan saldırı, şiddet) ile ilgili katılımcıların sınırlı paylaşımı dolayısıyla eksik bildirim olabilir. Çalışmanın bir diğer kısıtlılığı da Kish yönteminin

kullanılması ile ilgilidir. Bu yöntem, hane halkı bazında seçkisiz örnekleme sağlarken, bu çalışmada kadın örneklemin daha fazla olması ve kadın populasyonu daha temsil etmesi şeklinde sonuçlanmıştır. Son olarak, travmatik olaylar hakkında geriye dönük veriler toplandığı için, özellikle, olay ile ilgili ruminasyon envanterinde katılımcılar söz konusu travmatik olaydan hemen sonraki dönemleri hatırlamakta zorluk yaşamışlardır.

Öneriler

Bu çalışma bulgularıyla kişiliğin, bilişsel işleme ve başa çıkma stratejilerinin rolü araştırılmış, travma sonrası gelişim sağlamaya imkan tanıyan yollar sunularak, bireye yaklaşım ve bireylerin tedavisinde rehberlik sağlamıştır. Ruh sağlığı hizmetlerinde, ruminatif süreçleri teşvik etmek, aktif başa çıkma mekanizmalarını iyileştirmek ve sosyal destek (varsa) farkındalığını sağlamak, TSG'nin kolaylaştırıcı değişkenleri olarak ele alınmalıdır.

Bir öneri, travma öncesindeki faktörleri, travma sırasında ve travma sonrası işleme ve TSG'i teşvik eden adaptif tedavi stratejilerinin olası etkilerini gösteren bir tedavi kılavuzu hazırlanması olacaktır. Gelecekteki araştırmalardaysa, travmatik olayların doğasını, bu olayların anlamını; istemli ruminasyon, başa çıkma ve TSG'yi kolaylaştıran adaptif yolları anlamak için derinlemesine nitel veri analizi uygulamak önerilmektedir. Ayrıca, bu çalışmada ele alınmamış belirti şiddeti ve/veya TSG üzerinde etkisi olabilecek diğer risk/katkı faktörlerini (kontrol algısı, umutsuzluk, öz-suçlama, gibi) ileride araştırılabilir. Bu çalışmada elde edilen bulgular gelecekte farklı örneklemlerde çoğaltılmalıdır. Son olarak, takip çalışmalarının (boylamsal çalışmalar) gerekliliği özellikle TSG için gereken zamanın değerlendirilmesi açısından değerli katkılar sağlayacaktır.