POSTTRAUMATIC STRESS AND POSTTRAUMATIC GROWTH IN THE AFTERMATH OF TERRORISM: THE ROLES OF EXPOSURE, MEDIA, WORLD ASSUMPTIONS, COPING, AND RUMINATION

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ABSTRACT

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The current study aims to investigate the factors related to the negative (i.e., posttraumatic stress) and positive (i.e., posttraumatic growth) psychological consequences of the repeated terrorist attacks that occurred between the years of 2015 – 2017 in Turkey. With this aim, the predictive roles of several pre-event, event-related, and post-event factors were examined in explaining participants' level of posttraumatic stress symptoms versus posttraumatic growth. These factors were sociodemographic variables, prior trauma experiences, degree of terror exposure, level of media exposure to the attack, time that elapsed since the attack, event-related rumination, coping, and world assumptions. The sample consisted of 305 adults (226 females, 79 males), aged between 18 and 58. The participants were given Sociodemographic Information Form, Traumatic Event Checklist, World Assumptions Scale, Exposure to Terror Attack Inventory, The Impact of Event Scale – Revised, the Event-Related Rumination Inventory, Ways of Coping Inventory, and the

Posttraumatic Growth Inventory respectively. Separate hierarchical multiple regression analyses were conducted for PTS, PTG and all of their domains. The main findings showed that older age, lower education, higher level of media exposure to the attack, more intrusive rumination, negative assumptions of benevolence of the world and positive assumptions of justice/controllability were predictors of the PTS in the last step of regression. Moreover, having previous trauma experience, more engagement in deliberate rumination, more use of fatalistic coping and seeking social support/optimistic coping, positive assumptions of justice/controllability and intrusion symptoms predicted PTG in the last step. The results were discussed in relation to the existing literature and clinical implications. Strengths, limitations, and directions for future research were also presented.

Keywords: posttraumatic stress, posttraumatic growth, terrorism, rumination, media

ÖZ

TERÖR OLAYLARININ ARDINDAN TRAVMA SONRASI STRES VE TRAVMA SONRASI GELİŞİM: MARUZ KALMANIN, MEDYANIN, DÜNYAYA İLİŞKİN VARSAYIMLARIN, BAŞ ETMENİN VE RUMİNASYONLARIN ROLÜ

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Bu çalışmanın amacı, Türkiye'de 2015 – 2017 yılları arasında gerçekleşen terör olaylarının olumsuz (travma sonrası stres) ve olumlu (travma sonrası gelişim) psikolojik sonuçları ile ilişkili faktörleri incelemektir. Bu amaçla, bazı olay öncesi, olaya ilişkin ve olay sonrası faktörlerin, katılımcıların TSS ve TSG düzeylerini açıklamadaki yordayıcı rolü incelenmiştir. Bu faktörler, sosyodemografik değişkenler, geçmiş travmatik olay deneyimi, psikiyatrik öykü, teröre maruz kalma düzeyi, teröre medya aracılığı ile maruz kalma düzeyi, olayın üzerinden geçen zaman, olay ilişkili ruminasyon, baş etme ve dünyaya ilişkin varsayımlardır. Çalışmanın örneklemi, yaşları 18 ile 58 arasında değişen 305 yetişkinden (226 kadın, 79 erkek) oluşmaktadır. Katılımcılara sırasıyla, Sosyodemografik Bilgi Formu, Travmatik Yaşantı Listesi, Dünyaya İlişkin Varsayımlar Ölçeği, Terör Olaylarına Maruziyet Formu, Olay Etkisi Ölçeği Gözden Geçirilmiş Formu, Olaya İlişkin Ruminasyon Ölçeği, Baş Etme Yolları

Ölçeği Türkçe Formu, ve Travma Sonrası Gelişim Ölçeği verilmiştir. TSS, TSG ve ikisinin tüm alt boyutları için ayrı ayrı hiyerarşik çoklu regresyon analizleri yapılmıştır. Temel bulgular, analizin son basamağında, daha yaşlı olmanın, düşük eğitim düzeyine sahip olmanın, terör olayına medya üzerinden daha çok maruz kalmanın, istemsiz ruminasyonun, dünyanın iyiliğine dair olumsuz varsayımların ve dünyanın adil/kontrol edilebilir bir yer olduğuna dair olumlu varsayımların yüksek TSS puanlarını yordadığını göstermiştir. Ayrıca, TSG için yapılan analizin son basamağında, geçmiş travmatik deneyime sahip olmak, istemli ruminasyon, kaderci baş etme ve sosyal destek arama/iyimser baş etme, dünyanın adil/kontrol edilebilir bir yer olduğuna dair olumlu varsayımlar ve intrusif TSS belirtileri TSG'yi yordayan faktörler olmuştur. Çalışmanın sonuçları, literatür bulguları ve klinik göstergeler açısından tartışılmıştır. Çalışmanın güçlü yönleri, kısıtlılıkları ve gelecek çalışmalar için öneriler de ayrıca sunulmuştur.

Anahtar kelimeler: travma sonrası stres, travma sonrası gelişim, terör, ruminasyon, medya

To the ones we lost

&

the ones who are left behind

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CHAPTER 1

INTRODUCTION

Terrorism, with all its kinds, has increased markedly in the last few decades and became a global source of threat. With its pervasive, brutal and deadly nature, terrorist attacks occur every day somewhere in the world for thousands of reasons. Although causing lots of fatalities and injuries in civilians, terrorism actually targets survivors. Terrorist acts destroy the sense of safety and creates widespread terror, fear and uncertainty in individuals and communities to achieve political gains (Fullerton, Ursano, Norwood, & Holloway, 2003). Terror attacks tend to randomly occur to people seen as innocent in places considered to be safe, thus violate the communities' basic beliefs and assumptions about the world and people. Thus, terrorism is generally considered as a form of psychological warfare (Horgan, 2005). According to the Global Terrorism Report (National Consortium for the Study of Terrorism and Responses to Terrorism, 2018), there were 10,900 terrorist attacks around the world in 2017 and more than 26,400 people were killed in these attacks. In the report, it is stated that although there is a decline in the number of attacks and causalities, the violence of terrorism is still extraordinarily high.

Parallel to the rise of terrorist attacks in different parts of the world, the efforts to understand the psychological impact of terrorism have increasingly become the subject of studies since the late 20th century. In this sense, the first attempts were by the studies conducted with people of Northern Ireland (See Cairns & Wilson, 1989 for a review of these studies) and an epidemiological study with survivors of series of terror attacks in France (Abenhaim, Dab, & Salmi, 1992). Since then, studies documented psychological outcomes of terror attacks such as heightened level of distress, posttraumatic stress reactions, disrupted functioning, traumatic bereavement, maladaptive behaviors, posttraumatic stress disorder and other psychiatric disorders

(e.g., depression, anxiety disorders, etc.) (Fullerton et al., 2003). Despite the initial focus on terrific consequences, later research also documented alternative, but more common, trajectories of posttraumatic adjustment such as resilience and recovery. Furthermore, there has also been a growing recognition of positive changes (i.e., posttraumatic growth) following traumatic events.

The psychological impact of terrorism is not limited to survivors; it extends to direct witnesses, families, helpers, and also communities and even the regions far from the affected site. At this point, it is important to acknowledge the threatening role of the media in addition to its reassuring role of providing correct and essential information in the aftermath of such disasters (Fullerton et al., 2003). Media provides for intrusive, insensitive images and verbal information, which helps spreading the fear and threat for future attacks into the community. Similar to other forms of direct or indirect exposure to terrorism, terror-related media consumption is also anxiety-provoking since it faces the individual with existential threat (Shoshani & Slone, 2008). In sum, all of the members of the affected communities are vulnerable to various psychological consequences of terrorism. However, these outcomes are not the direct result of the terror exposure; there are several pre-event, event-related and post-event factors that determine the psychological consequences of terror attacks.

The current study aims to investigate the factors related to the negative (i.e., posttraumatic stress) and positive (i.e., posttraumatic growth) consequences following a series of terror attacks that occurred between the years of 2015 – 2017 in Turkey. With this aim, the predictive roles of several pre-event, event-related, and post-event factors were examined in relation to posttraumatic stress (PTS) and posttraumatic growth (PTG). These factors are sociodemographic factors, mental health status, mental health history, previous traumatic experiences, degree of exposure to terror attacks, level of media exposure related to attacks, time since the attack, world assumptions, event-related rumination, and ways of coping. In the following sections of this chapter, the concept of psychological trauma and experience of terrorism as a trauma will be discussed. Then, theoretical models and literature findings about PTS and PTG as the psychological outcomes will be presented. Lastly, pre-event factors, event characteristics, world assumptions, rumination, and coping and their relationship with PTS and PTG will be explained.

1.1 The Concept of Trauma

Definition of trauma in psychiatric terminology has been changed throughout the years. World Health Organization (WHO, 1992) defined traumatic experience as an either short or long lasting encounter with an extraordinarily catastrophic event or situation that would evoke distress in most people. Similarly, in the third version of Diagnostic and Statistical Manual of Mental Disorders (DSM), traumatic experience was defined as a catastrophic experience that was outside the range of usual human experience and significantly distressing to almost anyone (American Psychiatric Association [APA], 1980). In the later versions of DSM, the definition of trauma was narrowed to threats to physical integrity (See Pai, Suris, & North, 2017 for the review of changes). Recently in DSM-5 (APA, 2013), traumatic experience has been described as exposure to actual or threatened death, serious injury, or sexual violence either by directly experiencing, by witnessing in person as the event occurs to others, by learning that a violent event occurred to a close one, or by experiencing repeated or extreme exposure to aversive details of the event (not through media unless work-related). This view of trauma which is limited to threats to physical integrity has been criticized since it excludes threats to psychological integrity that could also be extremely overwhelming (e.g., extreme emotional abuse, non-violent loss of a loved one etc.) (Briere & Scott, 2015). Although the definition of trauma and qualifying characteristics of traumatic events have been a much-debated issue, it can be certainly concluded that an experience is traumatic if it is "1) sudden, unexpected or non-normative, 2) exceeds the individual's perceived ability to meet its demands and 3) disrupts the individual's frame of reference and other central psychological needs and related schemas" (McCann & Pearlman, 1990, p. 10). As Herman (1992) stated, traumatic events are extraordinary not because of their rare occurrence but rather because of their devastating effect on the usual adaptations to life. They evoke extreme helplessness and terror in those who are exposed to it (p. 33).

Traumatic events include natural disasters (earthquakes, floods, hurricanes etc.), accidents (transportation accidents, domestic fires/explosions, workplace accidents etc.), mass violence (wars, terrorist attacks, political violence, etc.), interpersonal violence (physical assault, rape, domestic violence, child abuse, torture, etc.), life-threatening illnesses, witnessing death or serious injury, and unexpected loss of loved

ones (Briere & Scott, 2015). Fullerton et al. (2003) suggested that traumatic events can be broadly categorized according to who is exposed: communities exposed (i.e., disasters) or the individuals exposed. Furthermore, community based traumatic events are categorized by whether they are caused by natural events or human-made while individual based events are categorized by whether they are accidental or intentional. A further distinction can be made regarding human-caused disasters as error or neglect (e.g., industrial accidents, plane crush) and intentional (e.g., terrorism, genocide) human-caused disasters.

According to studies conducted with various populations, fifty-five to ninety percent of the population reported experiencing a traumatic event at least once in their lifetime (Boals, Riggs, & Kraha, 2013; Breslau et al., 1998; Breslau, Wilcox, Storr, Lucia, & Anthony, 2004; Creamer, Burgess, & McFarlane, 2001; Darves-Bornoz et al., 2008; De Vries & Olff, 2009; Ferry et al., 2014; Frans, Rimmö, Åberg, & Fredrikson, 2005; Kessler, Sonnega, Bromet, Hughes, Nelson, 1995; Kessler et al., 2017; Kilpatrick et al., 2013; Norris et al., 2003; Olaya et al., 2015). In a study with 68,894 participants from 24 countries, 70.4% of the respondents reported experiencing at least one traumatic event lifetime and 30.5% reported four or more events (Benjet et al., 2016). In the same study, the most commonly reported traumatic events were listed as accidents/injuries, unexpected death of a loved one, intimate partner/sexual violence, and witnessing/causing death or serious injury. As for the Turkish population, Karanci, Aker, et al. (2012) reported that the lifetime prevalence rate of experiencing at least one traumatic event was 84.2 percent among an adult sample from 3 provinces (i.e., Ankara, Kocaeli, and Erzincan). The most prevalent traumatic events reported in the same study were natural disasters (40.6%), loss of a loved one (28.1%), and severe accident/fire/explosion (11%). Thus, it can be concluded that the prevalence of experiencing traumatic events is quite high. In the next section, a specific type of traumatic event, terrorism, which is the topic of interest for the current thesis, will be explored.

1.2 Terrorism as a Traumatic Experience

Acts of terrorism are a particular type of traumatic event that is characterized by being intentionally human-caused disaster (Fullerton et al., 2003). Although the legal

definition of terrorism differs across countries, in its broadest terms, the concept of terrorism corresponds to "the use or threat of use of violence as a means of attempting to achieve some sort of effect within a political context" (Horgan, 2005, p. 1). Means of terrorism use or threaten to use different forms of violence such as bombings, hijackings, or chemical and biological weapons on a group of people to influence the greater community for the ultimate goal of political change (Horgan, 2005). Terror acts aim to create strong psychological responses far beyond the physical damage and evoke extensive fear, arousal, heightened sensitivity, and sense of uncertainty in the society (Butler, Panzer, & Goldfrank, 2003). In this regard, terrorism can be seen as "a psychological assault that challenges the society's sense of safety, security, and cohesion" (Hamaoka, Shigemura, Hall, & Ursano, 2004, p. 531). Communities exposed to terrorism, experience multiple traumatic events such as threat to life, loss of property, exposure to death and injuries, and economic damage (Fullerton et al., 2003). Acts of terrorism have several characteristics that give them their devastating potency: they are intentional and unpredictable, leading to a pervasive sense of fear, disruption of safety, sense of vulnerability, loss of control, and loss of confidence in institutions (Butler et al., 2003; Fullerton et al., 2003). Due to these distinct characteristics, terrorism has particularly more destructive effects on psychological and social functioning and has more potential to engender distress, psychopathology, and behavioral change as compared to other disasters (Butler et al., 2003; Everly & Mitchell, 2001).

Acts of terrorism, by design, have power to affect a wider audience than the immediate sufferers at whom physical violence is targeted (Friedland & Merari, 1985). Therefore, victims of terrorism are not limited to the individuals who directly experienced the attack through physical injury or physical threat, but also include those directly witnessing the attack occurring to others, having close ones killed or injured or physically in danger during the attack, having financial or property loss due to the attack, listening to the details of the event from survivors, being a support provider for survivors, and even being exposed to the details of the attack via the public and the media (Butler et al., 2003). Given the fact that terrorism is about spreading the fear and creating a general climate of uncertainty, fear and arousal in the society (Horgan, 2005), it is not unexpected that people can be exposed to the impact of terror events

by media tools and perceive these events as life-threatening for the self and loved ones. Although non-work-related exposure via media is clearly excluded in DSM-5, growing literature on psychological outcomes of terrorism has acknowledged the role of media consumption as a means of indirect exposure (May & Wisco, 2016). Media exposure to terrorism was found to be associated with high levels of anxiety, anger, acute stress, posttraumatic stress symptoms, feelings of insecurity and vulnerability (Dougall, Hayward, & Baum, 2005; Slone, Shoshani, & Baumgarten-Katz, 2008). In this regard, the current study considers all types of directly and indirectly exposed people as victims of terrorism.

1.3 Terrorism in the Context of Turkey

Citizens of Turkey have been targets of many terrorist groups such as the Hizbullah, PKK, TAK, Al-Qaeda, ISIS, for decades. According to the data from Global Terrorism Database (National Consortium for the Study of Terrorism and Responses to Terrorism [START], 2018), the number of terrorist attacks that occurred in Turkey peaked during 1990-1995 and then declined till the beginning of 2010s and peaked again between the years of 2015-2017. Back in 1990s, most of the attacks were centered in southeastern region of the country. However, the brutality of the attacks has increased since terrorist acts have spread to big cities and targeted civilians more since the beginnings of 2010s. According to the data from Global Terrorism Database (START, 2018), during a period from 2015 to 2017, terrorist attacks that targeted civilians reached its peak for all times in Turkey. In this period, a series of terror attacks took place in several cities of the country, with hundreds of civilians killed and thousands injured. The most brutal of these attacks occurred in Ankara that is the capital city of Turkey in October, 2015 and perpetuated by two suicide bombers from ISIS. The attack targeted 'Labor, Peace and Democracy' rally organized outside of the Ankara Central railway station. This attack which led to the death of almost 100 civilians and injury of almost 400 people is the deadliest terror attack in the history of Turkey (BBC, 2018). After this attack, in 2016, Ankara had been the target of two other brutal attacks that occurred in different parts of the most crowded district, 'Kızılay' (i.e., Güvenpark Bus station and Merasim Street Bombings). During this period, violent terror attacks targeting the civilians were taking place in other cities of Turkey such as Istanbul, Gaziantep, Şanlıurfa and Şırnak. While Turkish people were struggling with these attacks and their impacts, a coup

attempt by a group called Peace at Home Council was carried out in 15 July, 2016. During the coup attempt, many government buildings were bombed in Ankara and Istanbul, and many people were killed and injured. Thus, the present study was carried out with such a history of terror in Turkey.

1.4 The Psychological Aftermath of Exposure to Terror Attacks

As the research on psychological responses to terror attacks (Bleich, Gelkopf, & Solomon 2003; Bonanno, Galea, Bucciarelli, & Vlahov, 2006; De Jong et al., 2001; Galea et al., 2002; Hall, Hobfoll, Canetti, Johnson, & Galea, 2009; Hobfoll, Canetti-Nisim, & Johnson, 2006; Miguel-Tobal et al., 2006; North et al., 1999; Rubin, Brewin, Greenberg, Simpson, & Wessely, 2005; Shalev & Freedman, 2005; Salguero, Fernández-Berrocal, Iruarrizaga, Cano-Vindel, & Galea, 2011) and other traumatic events (Breslau, Davis, Andreski, & Peterson, 1991; Cieslak et al., 2009; Kessler et al., 1995; Shakespeare-Finch, Smith, Gow, Embelton, & Baird, 2003) indicated, exposure to a traumatic event can have various psychological consequences ranging from resilience to chronic psychopathology. During the weeks following a traumatic experience, majority of people may experience mild problems which are common and adaptive reactions and tend to go away on their own with time (Fullerton et al., 2003). A smaller group of people may experience moderately severe symptoms that could persist for a while. Still a small but a significant group of people may develop highly severe posttraumatic stress symptoms (i.e., repeated re-experiencing of the event, avoidance of reminders and hyper-arousal) in the long term. These symptoms may not always be diagnosed as a psychiatric disorder but can still be highly distressing and debilitating for the individuals. When meeting the diagnostic criteria given in classification systems, these intense posttraumatic symptoms can be diagnosed as Acute Stress Disorder (ASD) and Posttraumatic Stress Disorder (PTSD). In addition to ASD and PTSD, some other psychopathology (e.g., major depression, substance abuse, anxiety disorders, adjustment disorders, and eating disorders) can be seen in the aftermath of a traumatic experience (Breslau et al., 1991; Kessler et al., 1995; North et al., 1999). However, it is clear that traumatic experiences do not always and only lead to adverse outcomes. The focus has increased towards the fact that most of the people show resilience or recover from initial symptoms, and even some of them experience positive changes in response to coping with the traumatic events.

Resilience refers to the capacity of people to maintain relatively stable and healthy levels of psychological functioning in the aftermath of a traumatic experiences (Bonanno, Westphal, & Mancini, 2011). Resilient people can experience brief salient disruptions (e.g. disturbed sleep or loss of appetite) but still are able to maintain healthy functioning and an equilibrium (Bonanno, 2004; Bonanno, Papa, & O'Neill, 2001). Recovery refers to a different concept in which people first experience some levels of psychopathological symptoms that impede their functioning and then gradually regain pre-trauma levels of functioning (Bonanno, 2004). Resilience and recovery are considered as the result of a normative trajectory following a traumatic experience (Bonanno, 2004). As for the posttraumatic growth (PTG), it refers to the positive psychological transformations occurring as a result of psychological struggle in the aftermath of a traumatic experience (Calhoun & Tedeschi, 1999). In the present study, posttraumatic psychological responses to terror attacks will be examined not in terms of any psychiatric diagnosis but only in the frame of posttraumatic stress symptoms (PTS) and posttraumatic growth (PTG). In the following sections, PTS and PTG will be discussed in detail.

1.4.1 Posttraumatic Stress (PTS)

Following a traumatic event, a significant number of people can experience some cognitive, emotional, behavioral, and physical reactions which vary in severity and duration. Some common examples of these reactions include recurrent flashbacks or nightmares, intrusive thoughts and memories, impaired concentration and memory, fear and anxiety, feeling depressed, hypervigilance, bursts of anger, irritability, a sense of emptiness or hopelessness, disturbed sleeping, being over protective of close ones, detachment from relationships, increased conflict in relationships, avoidance of reminders, and feeling numb or disconnected (Briere & Scott, 2015). Although the general tendency is a decline in the severity of these symptoms shortly after the event, sometimes these symptoms may persist longer and become detrimental to the functionality of the individuals in many areas (Fullerton et al., 2003). PTS reactions have been the focus of medical and psychiatric interest for decades in explaining especially the effects of wars on surviving soldiers, child abuse, and rape. Throughout the history, trauma-related stress reactions were labeled with various names such as traumatic neuroses, hysteria, railroad spine syndrome, nervous shock, war neurosis,

combat stress, shell-shock, battle fatigue, concentration camp syndrome, and the survivor syndrome (Van der Kolk, Weisaeth, & Van der Hart, 2007). Interest of the psychiatry in traumatic reactions became more centered after World War I and II and more systematized after the Vietnam War (Herman, 1992). Until the publication of DSM-III (APA, 1980), reactions to traumatic stress were explained with various names in classification systems: 'acute situational maladjustment' (ICD-6; WHO, 1948), 'gross stress reactions' (DSM-I; APA, 1956), 'adjustment reaction to adult life' (DSM-II; APA, 1968), 'acute reaction to stress' (ICD-9; WHO, 1977). With DSM-III, a new diagnostic category named as Posttraumatic Stress Disorder was introduced into psychiatry nomenclature. When firstly introduced in DSM-III, PTSD was considered as natural, expected result of trauma exposure. Since then, the diagnostic criteria for PTSD had been modified through DSM-IV and DSM-5 (See Friedman, Resick & Keane, 2014 for details of the changes). Also since DSM-IV, acute posttraumatic symptoms that last three days at least and four weeks at most were coded as a separate diagnosis, namely Acute Stress Disorder. PTSD is a serious psychiatric diagnosis characterized with intense, prolonged –and sometimes delayed expressions of various symptoms in response to trauma exposure (APA, 1994). Currently, PTSD is codified as a diagnosis in both DSM-5 and ICD-10. In DSM-5, it was characterized with twenty symptoms under four distinct symptom clusters labeled as intrusion, persistent avoidance, negative alterations in cognitions and mood, and marked alterations in arousal and reactivity.

1.4.1.1 Prevalence

According to different epidemiological studies, the lifetime prevalence rate of PTSD ranges between 1.1% and 12.3% in the general adult populations (Breslau et al., 1991; Breslau et al., 2004; Bromet et al., 2017; Darves-Bornoz et al., 2008; Frans et al., 2005; Kessler et al., 1995; Kessler et al., 2017; Kilpatrick et al., 2013; Norris et al., 2003; Olaya et al., 2015; Perkonigg, Kessler, Storz, & Wittchen, 2000; Resnick, Kilpatrick, Dansky, Saunders, & Best, 1993). The prevalence of lifetime PTSD in the general population was found to be exceptionally high (16% - 37%) in post-conflict nations (De Jong et al., 2001). In general, intentional acts of interpersonal violence were associated with higher probability of developing PTSD than accidents or disasters (Kessler et al, 1995; Stein, Walker, Hazen, & Forde, 1997; Creamer et al, 2001). As

for the Turkish population, epidemiological studies are very limited. One study done by Karanci, Aker et al. (2012) revealed 9.9% of probable PTSD prevalence among an adult sample from 3 provinces. In a study with adult sample from İzmir, PTSD prevalence found to be 10.8% (Gul, 2014).

There are many studies done particularly in the aftermath of terror attacks, revealing different prevalence rates of terror-related PTS symptoms and PTSD (Abenhaim et al., 1992; Bleich et al., 2003; Bleich, Gelkopf, Melamed, & Solomon, 2006; Galea et al., 2002; North et al., 1999; Rubin et al., 2005; Schlenger et al., 2002; Schuster et al., 2001; Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002; Verger et al., 2004). Although the prevalence rates vary as a result of several factors which will be discussed later, the prevalence of terror-related PTSD was found to be 10.9% in a meta-analysis of research on general population following Oklahoma City Bombing and September 11 (DiMaggio & Galea, 2006) and 9.4% in a study of nationally representative Israeli residents (Bleich et al., 2003). Moreover, a review by Gidron (2002) revealed 28.2% prevalence rate of PTSD among individuals who were directly exposed to a terror attack. Although the majority of the people do not meet the full diagnostic criteria for PTSD following terror exposure, they do suffer from substantial PTS symptoms. For example, studies of Israeli residents revealed high prevalence (76.7% to 87%) of reporting at least one terror-related PTS symptom (Bleich, et al., 2003; Bleich et al., 2006; Shalev, Tuval, Frenkiel-Fishman, Hadar, & Eth, 2006). In another study of a nationally representative US sample, forty-four percent of the participants reported one or more substantial terror-related stress symptom (Schuster et al., 2001). With respect to the terror-related PTSD in Turkish samples, a study with the visual and auditory witnesses of an attack in Diyarbakır revealed 12.5% PTSD prevalence at one month and 9.6% at three months (Eşsizoğlu et al., 2009). In another study, Aker and his colleagues (2008) investigated the prevalence of PTSD following November 2003 Bombing Attacks in İstanbul. The results of their study revealed PTSD prevalence of 29.9% among survivors who applied to police station and 26.1% among staff of a high school near the attack area). These studies point out to the devastating effects of terror events. The extremely broad ranges of prevalence across studies can be due to differences in the study characteristics (e.g. methodology, sample, timing, etc.) as well as differences in event-related characteristics (e.g. the

type of the event, location of the event, level of destruction, level of exposure to the event, etc.) (McFarlane & De Girolamo, 2007). Next, the focus will turn into theoretical models explaining the impact of traumatic events.

1.4.1.2 Theoretical Explanations

Contrary to the early assumption of PTSD being a direct and normative consequence of traumatic experiences, the gap between high prevalence of trauma exposure and relatively low prevalence of PTSD demonstrates that exposure to traumatic events does not necessarily result in the development of PTSD symptoms. There are several psychosocial, genetic and biological factors and mechanisms playing a role in the development of PTSD symptoms. In the literature, there are several theoretical models attempting to explain the mechanism behind the development of PTSD symptoms and factors associated with it. In this section of the present thesis, brief overviews of some psychological models will be provided.

Early theories of PTSD were based on principles of learning and considered classical and operant conditioning as the main mechanisms explaining the symptoms of PTSD (Mowrer, 1960; Keane, Zimering, & Caddell, 1985; Kilpatrick, Veronen, & Best, 1985). In general, these conditioning theories focused on the conditioning of initial fear and anxiety symptoms with event related cues (i.e. classical conditioning) and maintenance of avoidance behavior through reduction in distress (i.e. negative reinforcement). In a more developed version of the learning theories of PTSD, Keane and Barlow (2002) proposed a vulnerability model and claimed that pre-existing psychological and biological vulnerabilities play a role in individuals' initial level of fear and anxiety (true alarm) and the development of learned fear and anxiety (learned alarm) and avoidance behavior.

Although learning theories explain the development of certain arousal and avoidance symptoms, they did not address the re-experiencing symptoms of PTSD (e.g., intrusive thoughts, flashbacks, dreams) (Foa, Steketee, & Rothbaum, 1989). Therefore, several cognitive processing models have been offered to explain the mechanism behind re-experiencing symptoms as well as arousal and avoidance symptoms. One model proposed by Horowitz (1986) asserted that people seek to understand the meaning or personal relevance of traumatic events as they keep the images of the event in active

memory. The model is based on the idea that people have a *"completion tendency"* that directs them to integrate the previous schemata and the new information. According to the model, the traumatic experience poses a threat to the individual's basic biological and emotional existence, which challenges the typical patterns of thinking about the self and the world. Unless the traumatic memories are integrated with acceptable view of the self and the world, the image of the event remains active maintaining posttraumatic stress symptoms. In this approach, these symptoms are the reflections of the efforts to process new information and the recovery process requires the repetitive "revision of both [previous schemata and new reality] until they agree" (Horowitz, 1986, pp. 92). In another model, Foa et al. (1989) used emotional processing theory (Foa & Kozak, 1986) to explain PTSD based on a fear-based memory network model. They claimed that a fear-based memory network develops following traumatic experiences and it contains information about trauma-related stimuli (images, voices), responses to the trauma (thoughts, feelings, behaviors), and the meaning of trauma stimuli and responses. The model posits that PTSD symptoms develop as a result of two core mechanisms: 1) activation of a fear network in which previously safe places/people become related with meaning of extreme danger and 2) continued failure to correct erroneous cognitions. According to this model, following the traumatic exposure, individuals' pre-existing safety assumptions become violated and they tend to see the world as less controllable and less predictable. Activation of this fear network by any stimuli results in symptoms of arousal (e.g., startle) and re-experiencing (e.g., nightmares, flashbacks). Avoidance or escape attempts (e.g., emotional numbing, behavioral avoidance, and depersonalization) prevent the integration of corrective information about safety and self-competence into the fear structure, leading to the maintenance of symptoms.

The cognitive theory of PTSD, developed by Ehlers and Clark (2000), proposed that individuals with persistent PTSD process the traumatic event in a way that creates a sense of current threat. According to their conceptualization, the sense of current threat ensues from two processes: 1) excessive negative appraisals of the traumatic event or its consequences, and 2) disturbance of the memory of the traumatic event and its integration to other autobiographical memories. Negative appraisals during the event (e.g., "Nowhere is safe") may increase the threat perception of the individuals. Threat

perception brings re-experiencing and arousal symptoms and other emotional responses, which evokes some dysfunctional behavioral or cognitive strategies (e.g., avoidance, escape, or rumination) to prevent the threat and the distress. This process leads to ongoing sense of threat and thus inhibits the change in negative appraisals, the elaboration of the trauma memory and its integration into the autobiographical memory, which results in in the maintenance of PTSD. The model suggests that characteristics of the event (e.g. duration, predictability) and pre-trauma characteristics of the person (e.g. experiences, beliefs, intellectual ability, and state factors) influence the threat perception, appraisal of the event and its consequences, and cognitive and behavioral strategies.

Freedy, Kilpatrick and Resnick (1993), provided a comprehensive model to explain the impact of disasters. In their Multivariate Risk Factor Model, they summarized the individual and environmental factors that can potentially affect the long term psychological adjustment of individuals in the aftermath of disaster exposure. The model proposed that several pre-disaster, within-disaster, and post-disaster factors and their interaction determine the post-disaster mental health adjustment of the individuals. Pre-disaster factors include demographic characteristics (e.g., age, gender, education etc.), experiential factors (e.g., high and low magnitude life events), mental health history, coping behavior, and social support. Within-disaster factors involve exposure to disaster and cognitive appraisal of the disaster exposure (e.g., high threat, low predictability, and low control). Post-disaster factors include initial level of distress, stressful life events in the post-disaster period, resource loss (e.g., personal and social), coping behavior, and social support. According to the model, these factors have a potential impact on each other and determine whether the mental health outcome will be positive or negative in the aftermath of disaster.

1.4.2 Posttraumatic Growth (PTG)

Traumatic events challenge individuals' basic assumptions and beliefs about the world, others and the self and disrupt many aspects of their life (Janoff-Bulman, 1985). Despite the negative impacts, the struggle following traumatic experiences can also result in positive psychological changes such as broadening life perspectives, development and recognition of personal and social resources and coping skills

(Tedeschi & Calhoun, 1995; Saakvitne, Tennen, & Affleck, 1998; Linley & Joseph, 2004; Schaefer & Moos, 1992). In the literature, the positive changes in the aftermath of stressful experiences have been referred to with various terms such as perceived benefits (McMillen, Smith, & Fisher, 1997), thriving (O'Leary & Ickovics, 1995), benefit finding (Affleck & Tennen, 1996), stress-related growth (Park, Cohen, & Murch, 1996), and adversarial growth (Linley & Joseph, 2004). Tedeschi and Calhoun (1999) used the term Posttraumatic Growth (PTG) to define the positive changes occurring as a result of the psychological struggle in the aftermath of a traumatic experience. PTG is considered to be different from such concepts as resiliency, hardiness, or optimism since these concepts refer to characteristics of people to manage or cope with traumatic experiences whereas PTG refers to a positive psychological transformation that is beyond the ability to manage or resist to stressful experiences. In other words, PTG involves a movement further rather than regaining or maintenance of pre-trauma functioning (Tedeschi & Calhoun, 2004; Janoff-Bulman, 2004). It was claimed that for the positive changes to occur, the event must be traumatic enough to challenge the person (Tedeschi, Park, & Calhoun, 1998). However, people who are the highest on resiliency, hardiness or optimism will be less shaken by traumatic experience due to their stronger coping capacities; therefore, they will supposedly report lower levels of growth (Tedeschi & Calhoun, 2004).

PTG can be manifested in different areas of life: perception of self, relationship with others, and philosophy of life (Calhoun & Tedeschi, 2006). Change in the perception of self involves developing a greater sense of personal strength and the recognition of new possibilities. Following traumatic experiences, people may start to view themselves as more vulnerable in the dangerous and unpredictable world. Yet, they can also recognize their personal strength (e.g., "If I handled this, I can handle almost anything."). In addition, people who develop PTG may recognize the possibility of different interests, activities and even a new path of life. As for the change in the relationships, it involves deeper, more intimate and more meaningful relationships with others. People who struggle with traumatic experiences may start to see that they have real friends supporting them in hard times. Also, they may show more self-disclosure and greater level of compassion and empathy for others in the aftermath of traumatic experiences. Change in the philosophy of life involves a greater appreciation

of life and increased spirituality. People who changed in this area may experience a shift in their priorities and a greater recognition of the value of the smallest things in their lives. Also, they may experience spiritual development or greater involvement with existential questions. Experiences of PTG can be summarized as a greater sense of personal strength; recognition of new possibilities; warmer, more intimate relationships with others; greater appreciation of life and changed sense of priorities; and spiritual development. Tedeschi and Calhoun (1996) suggested five domain names for these changes: personal strength, new possibilities, relating to others, appreciation of life, and spiritual change. Tennen and Affleck (1998) stated that the positive changes and growth can be considered as a process since the restructuring of the basic assumptions following the traumatic experience can take time. Still, changes in some domains may happen in the immediate aftermath of the traumatic event. Next, the prevalence of PTG will be explored.

1.4.2.1 Prevalence

There is growing number of studies showing that individuals may report posttraumatic growth in the aftermath of various types of traumatic events (Helgeson, Reynolds, & Tomich, 2006; Lindstrom, Cann, Calhoun, & Tedeschi, 2013; Linley & Joseph, 2004; Tedeschi & Calhoun, 2004) such as accidents (Nishi, Matsuoka, & Kim, 2010), war (Maguen, Vogt, King, King, & Litz, 2006; Powell, Rosner, Butollo, Tedeschi, & Calhoun, 2003), natural disasters (Xu & Liao, 2011; Karanci & Acarturk, 2005), sexual assault (Frazier, Canlon and Glaser, 2001), loss of a loved one (Davis, Michael, & Vernberg, 2007), chronic illness (Cordova et al., 2001). For example, Frazier et al. (2001) assessed the positive changes among female sexual assault survivors at four time points after the assault (2-week, 2-month, 6-month and 1 year). The results revealed that many survivors reported some positive changes in different areas at four time points: increased empathy (76% - 81%), appreciation of life (46% - 58%), better relationships (37% - 43%), and stronger self (28% - 54%). Positive changes in the aftermath of terror exposure have been specifically observed in several studies (Blix, Birkeland, Hansen & Heir, 2015; Butler et al., 2005; Fredrickson, Tugade, Waugh, & Larkin, 2003; Linley, Joseph, Cooper, Harris, & Meyer, 2003; McCormack & McKellar, 2015; Park, Aldwin, Fenster, & Snyder, 2008; Vázquez, Hervás, & Pérez-Sales, 2006).

1.4.2.2 Theoretical Explanations

Some theories conceptualized the positive changes in the aftermath of trauma as distorted positive illusions (Taylor & Brown, 1988) or enhanced self-regulation (Ford, Tennen, & Albert, 2008). Some other theories conceptualized PTG as an outcome characterized with positive transformations following traumatic experiences (Calhoun & Tedeschi, 1998; Schaefer & Moos, 1992). In this section, two of the latter theories will be briefly presented to explain the process of posttraumatic growth: the Model of Life Crises and Personal Growth (Schaefer & Moos, 1992) and the Functional Descriptive Model of PTG (Calhoun & Tedeschi, 1998; Tedeschi & Calhoun, 2004).

The Model of Life Crises and Personal Growth (Schaefer & Moos, 1992; 1998) presents a conceptual framework of the determinants of positive outcomes following life crisis or transition (See figure 1). The model posits four sets of factors: environmental system factors (e.g., pre-crisis and post-crisis social network and social support, living situation), personal factors (e.g., socio-demographic characteristics, temperament, motivation, cognitive ability, health status, self-efficacy, and prior trauma), event-related factors (e.g., type, severity, duration, predictability, controllability, pervasiveness) and cognitive appraisal and coping responses (problem-focused or emotion-focused). According to the model, life crises along with personal and environmental factors shape appraisal and coping responses, which in turn affects the development of positive outcomes. In this model, all the components are in interaction with each other via reciprocal feedback paths. Schaefer and Moos (1992) also defined three main categories of positive outcomes that correspond to three sets of factors in their model: enhanced social resources, enhanced personal resources, and development of new coping skills.

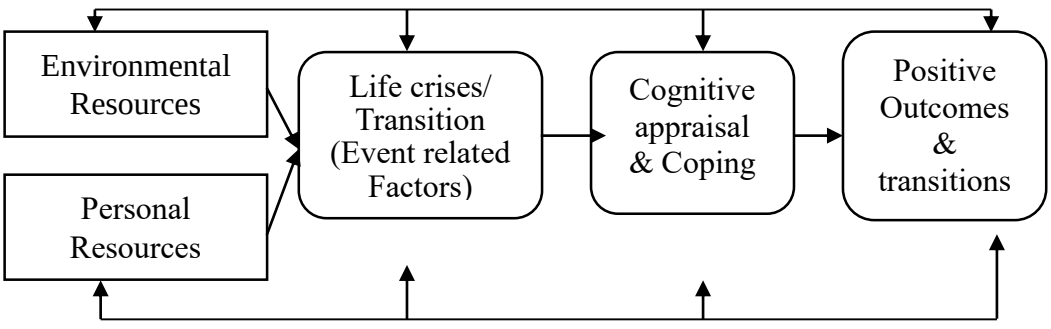

Figure 1. The Model of Life Crises and Personal Growth (Schaefer & Moos, 1992)

The Functional Descriptive Model of PTG (Tedeschi & Calhoun, 1995; Calhoun & Tedeschi, 1998; Tedeschi & Calhoun, 2004) is based on the assumption that growth is an ongoing process that resulted from not the traumatic event directly but the struggle with the new reality in the aftermath of trauma. The model (See Figure 2) emphasizes the role of individual characteristics, styles of managing the emotional distress, social system, self-disclosure, ruminations and the degree of the cognitive processing in the development of the PTG. According to the model, pre-trauma characteristics of the person (e.g. extraversion, openness to experience, positive emotions, etc.) can affect the processing of the event, enhancing the development of growth. The model is grounded on the "shattered assumptions" approach of Janoff-Bulman (1985; 1992) which asserts that individuals have a certain set of pre-existing, unquestioned beliefs and assumptions about the world and traumatic exposure shatters and challenges these assumptions. Accordingly, Calhoun and Tedeschi (1998) stated that traumatic events are the "seismic" events that severely shake and threaten the schematic structures (e.g., basic assumptions, beliefs, and goals) and disrupt the life narratives of the individuals. If this challenge is severe and overwhelming enough, the cognitive processing (i.e. rumination) is initiated by the emotional distress. At the initial stages, cognitive processing is generally automatic and characterized with intrusive thoughts and images and negative intrusive ruminations. Later, the person manages to reduce distress and disengage from previous goals with the contribution of coping mechanisms (e.g., self-disclosure, social support, etc.). This leads the person to reprocess the event and its consequences in a more intentional way. As a result, rumination becomes deliberate, accompanied by schema change and change of the individual's life narrative. If this process is successful, posttraumatic growth can occur. The extent of the cognitive processing of traumatic experience is the central factor in the process of the PTG. Tedeschi and Calhoun (2004) suggested that this process can take some time since the enduring distress keeps the cognitive processing active. Although the growth is associated with a decrease in emotional distress, it is claimed that some level of distress is necessary for the development and enhancement of growth after trauma (Tedeschi & Calhoun, 2004). Thus, from these it can be inferred that traumatic experiences can lead to both negative and positive aftermaths. Next, the relationship between the positive and negative consequences will be discussed.

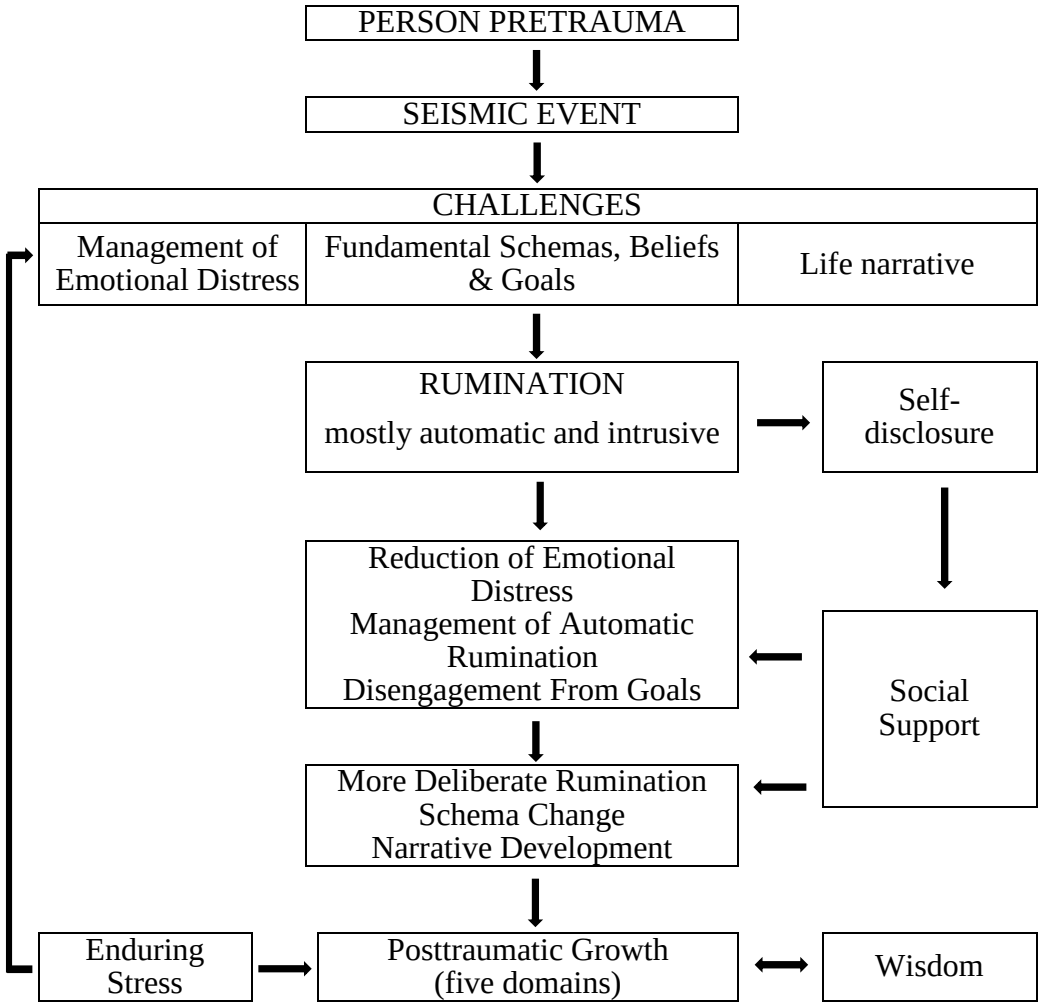

Figure 2. The Functional Descriptive Model of PTG (Calhoun & Tedeschi, 1998)

1.4.3 The Relationship Between PTS and PTG

As stated in previous sections, exposure to traumatic events may result not only in posttraumatic stress symptoms but also posttraumatic growth. However, this does not mean that PTS and PTG are two opposite points of a continuum. In other words, the experience of posttraumatic growth does not automatically mean the absence of posttraumatic stress or vice versa (Tedeschi & Calhoun, 2004). Rather, stress and growth in the aftermath of a traumatic experience can be seen as independent dimensions but still can be associated at the same time (Linley & Joseph, 2004). From the cognitive processing theories introduced in the previous sections, it can be concluded that when people encounter with a traumatic event that severely shatters their basic assumptions, they may end up with showing posttraumatic stress symptoms.

These re-experiencing, arousal and avoidance symptoms were considered as the indicators of the need for processing the new reality after trauma (Horowitz, 1986; Joseph & Linley, 2005). Moreover, Zoellner and Maercker (2006) suggested that PTS symptoms can be evaluated as manifestation of struggle in the aftermath of the trauma to find meaning, rather than merely as symptoms to be reduced. As the individuals successfully process the event, find meaning and reconstruct their broken assumptions, positive changes may increase and posttraumatic symptoms may cease (Horowitz, 1986; Joseph & Linley, 2005). However, increase in positive outcomes (i.e., growth) does not necessarily lead to a reduction in posttraumatic stress symptoms (Joseph & Linley, 2006).

Supporting the theory, one of the most consistent findings is that intrusion symptoms of PTSD is associated with posttraumatic growth (Morris, Shakespeare-Finch, Rieck, & Newbery, 2005; Park & Fenster, 2004; Shakespeare-Finch & De Dassel, 2009). However, the literature findings regarding the association between posttraumatic stress in general and growth are contradictory, revealing positive relationship (Dekel, Ein-Dor, & Solomon, 2012; Frazier et al., 2009; Hall et al., 2009; Linley & Joseph, 2004; Weiss, 2004; Laufer & Solomon, 2006; Tomich & Helgeson, 2004), negative relationship (Urcuyo et al., 2005; Kimhi, Eshel, Zysberg, & Hantman, 2010; Linley & Joseph, 2004), or no relationship (Cordova et al., 2001; Salsman, Segerstrom, Brechting, Carlson, & Andrykowski, 2009). For instance, in a study with bereaved HIV/AIDS caregivers, Cadell, Regehr, and Hemsworth (2003) found that avoidance and intrusion symptoms had a significant positive direct effect on PTG. Moreover, in a meta-analysis of 87 studies, Helgeson et al. (2006) found that growth was related more with intrusion and avoidance symptoms but also reduced depression and greater positive well-being. On the contrary, the meta-analysis done by Sawyer, Ayers and Field (2010) revealed that higher levels of perceived growth were related to decreased levels of PTS symptoms. Some studies claimed a curvilinear relationship between PTS and PTG (Butler et al., 2005; Kleim & Ehlers, 2009). In other words, they observed that positive changes were related to greater PTS symptoms and PTSD only when symptom severity was at moderate levels, but not when symptom severity increased. Moreover, Blix et al. (2015) claimed a varying relationship between levels of PTS and PTG following terror attack across time. The results of their study revealed that high

levels of PTS at 10 months was associated with high levels of PTG 22 months after the bombing. Also, high levels of PTG 10 months after the Oslo bombing were found to be associated with high levels of PTS symptoms at 22 months. The authors interpreted these findings as that PTG might be both a consequence and an antecedent of posttraumatic stress.

1.5 Factors Associated with PTS and PTG following Terror Attacks

Existing literature on the psychological impact of traumatic experiences has explicitly indicated that it is not only the traumatic exposure but also several other factors and their interaction that determine the psychological aftermath of a traumatic experience. In this section, the variables included in the present study (e.g., pre-event factors, event-related factors, world assumptions, rumination, coping) to predict PTS symptoms and PTG and the literature findings about these variables will be presented in detail.

1.5.1 Pre-event Factors

Many of the psychological models aforementioned included pre-existing individual and environmental factors that can be associated with the psychological outcomes of traumatic exposure. Genetic and biological vulnerability factors, socio-demographic factors (e.g., age, gender, income, education level, employment status, marital status), mental health status, mental health history, previous traumatic experiences, personality traits, environmental and cultural conditions are among the pre-event factors that can be associated with the posttraumatic outcomes. In general, these pre-event characteristics have been considered to have an impact on the initial level of fear and anxiety, threat perception, cognitive processing of the event, and coping responses; which, in turn, influences the development of PTS symptoms and PTG (Keane & Barlow; 2002; Ehlers & Clark, 2000; Freedy et al., 1993; Tedeschi & Calhoun, 2004; Schaefer & Moss, 1992). In the present study; gender, age, level of income, education level, employment status, marital status, psychiatric history and prior traumatic experiences will be examined as pre-event factors.

1.5.1.1 Pre-event Factors and PTS

Being female has been considered as a vulnerability factor for the development of PTSD in the aftermath of traumatic experiences (APA, 2013). A meta-analysis conducted by Tolin and Foa (2006) revealed that despite lower rate of traumatic exposure, women have nearly twofold greater risk for the development of PTSD symptoms as compared to men. Similarly, studies of Turkish samples revealed that being female was associated with a higher severity of PTS symptoms (Karanci et al., 1999; Karanci, Aker et al., 2012; Gul, 2014). Accordingly, most studies on gender differences in posttraumatic stress reactions in the aftermath of terror attacks indicated that women are more vulnerable to develop PTS symptomatology than men (Bleich et al., 2003; Bleich et al., 2006; Bowler et al., 2012; DeLisi et al., 2003; DiGrande, Neria, Brackbill, Pulliam, & Galea, 2010; Eşsizoğlu et al., 2017; Njenga et al., 2004; Rubin et al., 2005; Schlenger et al., 2002; Silver et al., 2002; Solomon & Lavi 2005). With respect to age differences, the literature findings have been inconsistent. In DSM-5, younger age at the time of exposure has been identified as a risk factor for the development of PTSD in adults. Moreover, in a meta-analysis done by Brewin, Andrews and Valentine (2000), younger age at traumatic exposure was found to convey small but significant risk for the development of PTSD. Consistently, Karanci, Aker et al. (2012) reported being younger as a predictor of PTS symptom severity in a Turkish sample. On the other hand, some studies reported that age did not relate to the development or severity of PTSD symptoms (Ullman & Filipas, 2001). The studies of psychological reactions to terror attacks indicated younger age (Schlenger et al., 2002), older age (DiGrande et al., 2008) or middle age (Verger et al., 2004) as a risk factor for the development of PTS symptomatology. Yet, some others reported no association (Silver et al., 2002; DiGrande et al., 2010). Socioeconomic status, education level, employment status, and marital status are among the other sociodemographic factors that can be associated with the development of PTS symptoms. In DSM-5, low SES and low education level are identified as risk factors for the development of PTSD (APA, 2013). The meta-analysis of Brewin et al. (2000) showed that low education level is a risk factor but not low SES. In line with these findings, Karanci, Aker et al. (2012) reported that level of income was negatively associated with the severity of PTS symptoms in a Turkish sample. As for the post-terrorism research, low SES

(Boscarino, Figley, & Adams, 2003; DiGrande et al., 2008; Rubin et al., 2005), low education level (Bleich et al., 2006; Boscarino et al., 2003; DiGrande et al., 2008; Hobfoll et al., 2008), unemployment (Njenga et al., 2004; Verger et al., 2004), and being single/unmarried/divorced (DiGrande et al., 2008; Galea et al., 2003; Silver et al., 2002) were found to be risk factors for the development of PTS symptoms. The possible explanations for the association between demographic variables and PTS symptomatology includes differences in threat perception, coping, resource level, cultural and historical context (Olff, Langeland, Draijer, & Gersons, 2007; Gibs, 1989; Norris et al., 2002).

Besides the sociodemographic variables, other pre-event factors included in the present study are prior mental health problems and prior exposure to traumatic events, which have been indicated as risk factors for the development of PTSD (APA, 2013). Two meta-analyses conducted to examine vulnerability factors for PTSD revealed that having a psychiatric history and having previous trauma experience increased the vulnerability to develop PTSD (Brewin et al., 2000; Ozer, Best, Lipsey, & Weiss, 2008). In a systematic review of prospective studies of PTSD, it was reported that previous psychopathology predicted PTSD symptomatology in most studies (DiGangi et al., 2013). Similarly, Karanci, Aker et al. (2012) found that psychiatric history was associated with the severity of PTS symptoms in a Turkish sample. Consistent with these findings, the studies particularly investigating PTS symptoms in response to terror attacks revealed that having a psychiatric history and prior trauma were associated with subsequent PTS symptoms (Ahern, 2004; DiMaggio & Galea, 2006; North et al., 1999; Galea et al., 2003; Silver et al., 2002). Yet, some studies (Verger et al., 2004) found no significant association between psychiatric history and terror-related PTSD symptomatology.

1.5.1.2 Pre-event Factors and PTG

Although being limited compared to studies on PTS, studies of growth in the aftermath of traumatic experiences including terrorism suggested some associations between sociodemographic variables and PTG. Similar to studies of PTS, research on PTG generally suggested that women are more likely to report PTG than men in the aftermath of exposure to terrorism (Val & Linley, 2006; Butler et al., 2005; Rimé,

Páez, Basabe, & Martínez, 2010; Vishnevsky, Cann, Calhoun, Tedeschi, & Demakis, 2010) and other types of trauma (Feder et al., 2008; Helgeson et al., 2006; Kesimci, Göral, & Gençöz, 2005). Some studies, on the other hand, reported no significant association between gender and PTG (Widows et al., 2005; Prati & Pietrantoni, 2009). In relation to age, findings are less consistent. In some studies, younger adults were found to report more growth in the aftermath of traumatic events (Helgeson et al., 2006; Linley & Joseph, 2004; Karanci, Işıklı et al., 2012; Gul & Karanci, 2017), including terrorism (Butler et al., 2005). On the other hand, some other studies found that reports of PTG increased with age (Vishnevsky et al., 2010). In some studies, higher levels of income and education were found to be facilitators of positive changes after trauma exposure (Hall et al., 2009; Karanci, Işıklı et al. 2012). Yet, in a meta-analysis, marital status and socioeconomic status were found to be unrelated to positive changes (Helgeson et al., 2006).

1.5.2 Event-related Factors

In addition to pre-event factors, the second set of factors proposed to predict the psychological outcomes of traumatic exposure are the event-related factors. Type of the event, perceived or objective severity of the event, degree of exposure and time elapsed since the event are among the factors related to event characteristics. As stated before, a traumatic event is characterized by its capacity to shake the existing reality of the individuals and this capacity is considered to depend on the characteristics of the event. Characteristics of the event are considered to influence the threat perception and initial reactions, cognitive processing of the event and its consequences, and coping responses (Ehlers & Clark, 2000; Freedy et al., 1993; McCann & Pearlman, 1990; Tedeschi & Calhoun, 2004; Schaefer & Moss, 1992). In the present study; level of terror exposure, level of media exposure, number terror attacks experienced, and time that elapsed since the attack were investigated as event-related variables that can be associated with the psychological aftermath of the terror attacks.

1.5.2.1 Event-related Factors and PTS

People differ in their degree of exposure to a traumatic event, which can carry differential risk for the development, severity and duration of PTS symptomatology.

Prior research consistently revealed a positive association between level of exposure and posttraumatic stress symptoms (Brewin et al., 2000; Johansen, Wahl, Eilertsen, & Weisaeth 2007; Norris et al., 2002; Sungur & Kaya, 2001; Başoğlu, Şalcıoğlu, & Livanou, 2004). In their systematic review, Neria and colleagues (2007) concluded that direct victims of disasters have the highest level of exposure and PTSD symptoms while the general population having the lowest level of exposure and PTSD symptoms. Mirroring the general disaster literature, post-terrorism studies indicated that higher degree of terror exposure was associated with more prevalent, severe and persistent PTSD symptoms (Galea et al., 2002; North et al., 1999; North, Pfefferbaum, Kawasaki, Lee, & Spitznagel, 2011; Gabriel et al., 2007; DiGrande et al., 2010; Silver et al., 2002; Schlenger et al., 2002; Smith, Christiansen, Vincent, & Hann, 1999). Reviews of the studies on terror-related PTSD concluded that higher PTSD prevalence rates were found among the directly exposed individuals as compared to the indirectly exposed individuals or the general population of the affected community (Neria et al., 2007; DiMaggio & Galea, 2006; Garcia-Vera, Sanz, & Gutierrez, 2016; Gidron, 2002). Although direct exposure to terror attacks poses potentially greater risk for the development of PTS symptoms, indirect exposure including media exposure was also found to be associated with PTS symptoms in many studies (Ahern et al., 2002; Ben-Zur, Gil, & Shamshins, 2012; Schlenger et al., 2002; Shalev et al., 2006; Soref, & Sever, 2005). The research on media exposure and PTSD showed that viewing media images of attacks doubled the risk of PTSD in both direct and indirect victims (DiMaggio & Galea, 2006). Furthermore, amount of event-related media exposure was found to be positively associated with PTS symptoms across many studies (Pfefferbaum et al., 2014). Some of the previous research reported media exposure as the predictor of long- term PTSD especially in vulnerable groups with prior history of trauma, psychiatric disorders, or genetic predisposition (Neria & Sullivan, 2010; Ahern et al., 2004). However, it is still not clear whether people develop PTS symptoms in response to media exposure or people who already experience stress symptoms are more inclined to follow the media. In case of ongoing terrorism, studies did not show a significant difference between direct and indirect victims in relation to PTS reactions (Shalev et al., 2006). Moreover, studies done in the areas proximal to the attack site tend to reveal higher prevalence rates of PTS symptoms or PTSD compared to geographically distant areas (Galea et al., 2002; Schlenger et al. 2002;

Schuster et al., 2002; Hansen, Nissen, & Heir, 2013; North et al., 2011). For instance, the prevalence of terror-related PTSD symptoms was found to be 20% among the closest residents to the World Trade Center as compared to 7.5% prevalence among general New York City residents (Galea et al., 2002). However, in a meta-analysis of 61 studies, the effect of proximity to terror attack was not confirmed when survivors and rescuers were excluded from the close-proximity group (DiMaggio & Galea, 2006). Being another event-related factor, the passage of time since the attack is associated with the PTSD symptomatology. Research on terror-related PTSD showed a general decline in the PTSD prevalence over time (Freh, Chung, & Dallos, 2013; Silver et al., 2002; Galea et al., 2003; Brackbill et al., 2009) while the symptoms are more persistent in directly exposed victims compared to indirectly exposed victims (DiMaggio & Galea, 2006; Garcia-Vera et al., 2016; Neria et al., 2007). However, some studies failed to find time or proximity effect in posttraumatic stress responses to continuous terrorism (Bleich et al., 2003; Shalev et al., 2006). Shalev et al. (2006) suggested that the time and proximity effect may not be present especially in the context of continuous terror since these attacks repeatedly occur anywhere and anytime, thus affecting a greater population over longer periods of time.

1.5.2.2 Event-related Factors and PTG

As suggested by theories of PTG (Tedeschi & Calhoun; 2004), higher severity of trauma exposure was potentially related to higher PTG. Supporting this assumption, previous research revealed that higher degree of exposure was associated with higher perceived benefit or growth (Feder et al., 2008; Helgeson et al., 2006; Laufer & Solomon, 2006; Xu & Liao, 2011; Zoellner, Rabe, Karl, & Maercker; 2008). For example, a study with an adult sample of earthquake survivors showed that those who have higher degree of disaster-exposure reported higher levels of PTG (Xu & Liao, 2011). However, some other studies found that the level of exposure did not predict growth (Dekel & Nuttman-Shwartz, 2009). The studies of PTG in the aftermath of terror attacks reported that greater levels of exposure were associated with greater levels of reported growth (Hobfoll et al., 2006; Park, et al., 2008). Furthermore, Bayer-Topilsky, Itzhaky, Dekel, & Marmor (2013) found that the level of subjective exposure was positively associated with PTG while direct objective exposure was not. The findings suggest that it may not be only the level of objective exposure but also the

subjective exposure (i.e., perceived severity) and threat appraisal that predicts PTG (Bayer-Topilsky et al., 2013; Dekel & Nuttman-Shwartz, 2009; Hall et al., 2009). The models of PTG (Schaefer & Moos, 1992) and research suggested that time since the event is another factor that predicts the development of PTG. Although some studies found that growth can be reported at the immediate aftermath of trauma exposure (Frazier et al., 2001; McMillen et al., 1997), in most studies a longer time lapse since the traumatic experience predicted higher PTG (Butler et al., 2005; Helgeson et al., 2006; Karanci, Işıklı et al., 2012). On the other hand, some other studies found no difference in PTG levels in relation to time since the event (Widows et al., 2005; Morris et al.; 2005).

1.5.3 World Assumptions

Examining the basic assumptions of individuals and the effect of traumatic exposure on these assumptions was considered as one way of understanding the psychological responses to traumatic experiences (Janoff-Bulman, 1989). As previously mentioned, many theorists have pointed out that traumatic experiences confront the individuals with a new reality that is highly inconsistent with the previous one. Preexisting reality of the individuals was conceptualized as the "assumptive worlds" which consist of "strongly held set of assumptions about the world and the self which is confidently maintained and used as a means of recognizing, planning and act" (Parkes, 1975, p. 132).

Janoff-Bulman (1989; 1992) identified three main categories of assumptions that are more central and fundamental: benevolence of the world, meaningfulness of the world, and worthiness of self. The category of benevolence of the world includes two basic assumptions: the benevolence of the world and the benevolence of people. If an individual believes in the benevolence of the world, he or she assumes that the world is a good place and that misfortune is relatively uncommon. Similarly, if an individual believes in the benevolence of people, he or she assumes that people are basically good, kind, helpful, and caring. The second category, meaningfulness of the world, involves beliefs about why particular events happen to particular people. In other words, it involves beliefs about the distribution of good and bad things happening to people. This category has three dimensions: justice, controllability and randomness.

Justice refers to belief that people get what they deserve and that people deserve what they get. In other words, good things happen to good people while bad things happen to bad people. Controllability, on the other hand, refers to the belief that people can directly control their world through their own behaviors. According to this assumption, people can avoid bad things happening to them or minimize their vulnerability if they behave carefully enough. The third one is randomness, which involves the belief that there is no meaning in the distribution of the events. This assumption says that it is just chance that certain things happen to certain people. In addition to assumptions of benevolence and meaningfulness of the world, the third category is the assumption of self-worthiness. Parallel to the three dimensions of the meaningfulness of the world, the assumption of self-worthiness includes three dimensions of self: self-worth, self-controllability, and luck. The first, assumption of self-worth, involves the extent to which people view themselves as good, moral, and decent. The second, assumption of self-controllability, refers the degree to which individuals view themselves as engaging in appropriate, precautionary behaviors. The third, assumption of luck involves the self-belief about being somehow protected from bad luck. As a whole, there are eight propositions in the conceptual model of world assumptions: benevolence of the world, benevolence of the people, justice, controllability, randomness, self-worth, self-controllability, and luck.

The work with survivors of traumatic events revealed that the basic assumptions are generally unquestioned and unchallenged in everyday living (Janoff-Bulman, 1992). Basically, it is supposed that people usually have a basic belief that it can't happen to them, which is an “illusion of invulnerability” (Janoff-Bulman, 1985; Perloff, 1983, p. 42). For instance, everyone knows that cancer or death in a traffic accident is very common, but they do not truly believe that they can also experience these events (Perloff, 1983). However, the horrifying nature of the traumatic experience leads the individuals to face their own vulnerability and question their existing basic assumptions about the world and themselves (Janoff-Bulman, 1985). In order to rebuild their shattered assumptive worlds, people struggle to integrate old assumptions and the new reality of traumatic experience rather than simply returning to previous assumptions (Janoff-Bulman, 1985; 1989; 1992). It is suggested that acts of terrorism, in particular, probably have a direct impact on the basic assumptions more than other

human-caused violent events due to their distinct characteristics (e.g., intentionality, unpredictability, continuous threat, etc.).

The basic assumptions of individuals who were exposed to trauma tend to be less positive than those of people who were not (Janoff-Bulman, 1989). Supporting this, in many of the previous studies, more negative world assumptions were observed in traumatized people (Foa et al., 1999; Magwaza, 1999; Matthews & Marwit, 2004; Walker, Archer, & Davies; 2011). According to the results of a study, those who experienced a traumatic event were found to hold more negative assumptions of the world and self as compared to those who did not even years after the traumatic experience (Janoff-Bulman, 1989). In another study, Matthews and Marwit (2004) found that bereaved parents tended to report more negative views of the benevolence of the world and lower self-worth than non-bereaved parents. In the same study, no difference was reported on the meaningfulness of the world dimension. Moreover, Chaiguerovaa and Soldatova (2013) conducted a study in Beslan town of Russia one year after a terrorist attack to investigate the impact of the attack. The results showed that those who were directly and indirectly exposed to terror attack had more negative assumptions of the meaningfulness of the world and benevolence of the world but no different assumptions of self-worthiness in comparison with the control group.

Several studies have specifically focused on the world assumptions and PTSD symptoms and found a negative association between positive world assumptions and symptoms of PTSD (Dekel, Mandl, & Solomon, 2010; Dekel, Solomon, Elklit, & Ginzburg, 2004; Ginzburg, 2004; Freh et al., 2013; Nygaard & Heir, 2012; Yuan et al., 2011). For example, in a study with 389 bus-train collision survivors, more negative assumptions of benevolence of the world, benevolence of the people, luck and self-worth were associated with more symptoms of PTSD (Solomon, Iancu, & Tyano, 1997). In another study with civilians exposed to bombings in Iraq, it was found that those exposed to bombings reported to view the world as less safe and the people as less trustworthy and less benevolent as compared to a non-exposed group (Freh et al., 2013). The same study also showed that negative assumptions of safety, vulnerability and controllability were associated with increased post-bombing PTSD even when severity of the attack was controlled.

Empirical evidence regarding the association between world assumptions and PTG is somehow contradictory. While some of the studies revealed a positive association (Bayer, Lev-Wiesel, & Amir, 2007; Dekel et al., 2010; Engelkemeyer & Marwit, 2008; Valdez & Lilly, 2015), some others revealed negative association (Lahav, Bellin, & Solomon, 2016). Yet, a study found different associations between different dimensions of assumptions and PTG (Carboon, Anderson, Pollard, Szer, & Seymour, 2005). According to their results, positive assumptions of justice and luck predicted higher levels of PTG while higher self-worth and self-controllability were associated with lower growth.

1.5.4 Rumination

Rumination is an important variable playing a role in the experience of PTS symptoms and PTG (Calhoun & Tedeschi, 1998; Ehlers & Clark, 2000; Cann et al., 2011). Rumination was defined as "a class of conscious thoughts that revolve around a common instrumental theme and that recur in the absence of immediate environmental demands requiring the thoughts" (Martin & Tesser, 1996, p. 7). Although rumination had been referred to as a negative concept in the literature, it can be basically described as a cognitive ''chewing the cud'' characterized with repetitive thinking about the causes, meaning and consequences of an experience (Cann et.al, 2011). Since the traumatic events shake and contradict basic assumptions and schemas, individuals need to work through and process the meaning and implications of the event in order to reduce contradiction and the emotional distress and re-build their assumptive world (Calhoun & Tedeschi, 1998; Horowitz, 1986; Janoff-Bulman, 1992). The reconstruction of the assumptive world is facilitated by cognitive processing characterized with the event-related repetitive thinking –i.e., rumination (Calhoun & Tedeschi, 1998; Greenberg, 1995; Cann et al., 2011; Watkins, 2008). Event-related rumination can be in the form of undesired, involuntary, automatic thoughts (i.e., intrusive rumination) but also it can be in the form of more controlled, purposeful thoughts (i.e., deliberate rumination) (Cann et al., 2011; Martin & Tesser, 1996). Both types of ruminations are considered to facilitate the processing of the trauma-related information, however; intrusive ruminations are considered as distressing and more associated with posttraumatic stress symptoms while deliberate ruminations are associated with finding meaning, schema reconstruction, and growth (Cann et al.,

2011; Tedeschi & Calhoun, 2004). When challenged by a traumatic experience, individual automatically engage in cognitive processing to reduce extreme distress (Tedeschi & Calhoun, 2004). The rumination in the early aftermath of trauma exposure tends to be intrusive and involves unproductive repetitive thoughts about the experience (e.g., why me?). Intrusive rumination predicts later deliberate rumination which helps the individual to make sense of the event and reconstruct their assumptions (Tedeschi & Calhoun, 2004; Cann et al., 2011). When the intrusive ruminations persist, the processing of the event becomes interrupted, which gives rise to prolonged PTS symptoms (Janoff-Bulman, 1992; Tedeschi & Calhoun, 2004).

The theorized relationship between the extent of event-related rumination and the degree of PTS symptoms and PTG was examined in several studies. For example, Triplett, Tedeschi, Cann, Calhoun, and Reeve (2012) investigated the association between core beliefs, rumination, distress and PTG in a sample of undergraduate students. They found that challenges to basic beliefs predicted both types of rumination and that intrusive rumination had strong positive effect on both deliberate rumination and PTS symptoms while deliberate rumination had strong direct effect on PTG. Other research also provided evidence for a positive association between event-related intrusive rumination, or negative repetitive thinking, and PTS symptoms but no significant association between deliberate rumination and PTS symptoms was reported (Chan, Ho, Tedeschi, & Leung, 2011; Clohessy & Ehlers, 1999; Ehring, Frank, & Ehlers, 2008; Morris & Shakespeare-Finch, 2011; Razik, Ehring, & Emmelkamp, 2013; Taku, Calhoun, Cann, & Tedeschi, 2008). Michael, Halligan, Clark, and Ehlers (2007) demonstrated that negative repetitive thinking triggered intrusive symptoms of PTSD. When it comes to PTG, many studies consistently provided evidence for a positive association between PTG and deliberate rumination (Allbaugh, Wright, & Folger, 2015; Gangstad et al., 2009; Gul & Karanci, 2017; Stockton, Hunt, & Joseph, 2011; Salsman et al., 2009; Morris & Shakespeare-Finch, 2011). Some other research reported intrusive rumination as well as deliberate rumination as the facilitators of PTG (Taku, Cann, Tedeschi, & Calhoun, 2009). In a study with survivors of a natural disaster, Garcia, Cova, Rincon & Vazquez (2016) found that deliberate rumination mediates the relationship between perceived exposure severity and PTG.

1.5.5 Coping

Many theoretical approaches explaining PTS and PTG consider coping as a critical post-trauma element that can promote or hinder the adaptation in the aftermath of traumatic experiences (Ehlers & Clark, 2000; Freedy et al., 1993; Gibbs, 1989; Schaefer & Moos, 1992; Tedeschi & Calhoun, 2004). Coping was defined as a dynamic process in which "the cognitive and behavioral efforts made to master, tolerate, or reduce external and internal demands and conflicts among them" (Folkman & Lazarus, 1980, p. 223). Folkman and Lazarus (1980) claimed that the process of responding to stress is determined by the reciprocal and ongoing relationship between the person and environment. According to them, the way people appraise the situation and cope with it affects this relationship. When individuals encounter a stressful situation, they evaluate the situation in terms of harm-loss, threat and challenge (i.e., primary appraisal). Also, they evaluate their existing resources to cope with the situation (i.e., secondary appraisal). These evaluations determine the level of psychological stress people experience and the ways of coping they choose. Coping has two general main aims: to change the source of stress (i.e., problem-focused coping) or to regulate the stressful emotions (i.e., emotion-focused coping). Folkman and Lazarus (1985) stated that although both types of coping co-occur, people tend to use more problem-focused coping if they appraise the situation as changeable. On the contrary, they use more emotion-focused coping when they see the situation as unchangeable. Problem-focused coping consists of problem-solving strategies directed at the environment and the self with the aim of altering the person-environment relationship which is the determinant of psychological stress (Lazarus & Folkman, 1984). In the literature, several forms of problem-focused coping were suggested such as confrontive coping, planful problem-solving, active coping, restraint coping, seeking of instrumental social support (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Carver, Scheier, & Weintraub, 1989). On the other hand, emotion-focused forms of coping include cognitive and behavioral strategies directed at the emotional distress. Different forms of emotion-focused coping were proposed such as distancing, self-control, seeking emotional social support, accepting responsibility, escape-avoidance, denial, turning to religion (Folkman et al., 1986; Carver et al., 1989).

The literature findings regarding the association between ways of coping and symptoms of PTSD generally suggested that more use of emotion-focused or avoidant coping was associated with higher symptoms of PTSD (Dörfel, Rabe, & Karl, 2008; Ullman, Filipas, Townsend, & Starzynski, 2007; Lilly & Graham-Bermann, 2010; Schnider, Elhai, & Gray, 2007; Schuettler & Boals, 2011) whereas use of more problem-focused or social support seeking coping was associated with lower levels of PTSD symptomatology (Ahern et al., 2004). Gul and Karanci (2017) examined the role of several types of problem-focused and emotion focused coping in explaining PTS following various traumatic life-events in a Turkish sample and found only fatalistic coping as the predictor of PTS. As another example, Schnider et al. (2007) examined problem-focused coping, and active and avoidant emotional coping in relation to PTSD symptom severity in bereaved undergraduate students. Although they found significant correlations between three ways of coping and PTSD symptom severity, only avoidant coping was found to be a predictor of PTSD symptom severity when time since event and trauma frequency were controlled in path analysis. Another study conducted with resettled refugees (Huijts, Kleijn, van Emmerik, Noordhof, & Smith, 2012) revealed a negative association of problem-focused coping with PTSD, positive association of avoidant coping with PTSD, and no significant association between emotion-focused coping, and social support seeking and PTSD. Consistent with the general trauma literature, studies of terror-related PTSD symptomatology revealed that problem focused or active coping was associated with fewer PTSD symptoms (Jensen, Thoresen, & Dyb, 2015; Silver et al., 2002) while emotion- focused or avoidant coping or disengaging from coping efforts was associated with high levels of PTSD symptomatology (Bleich et al., 2003; Gil & Caspi, 2006; Ben-Zur et al., 2012; Nuttman-Shwartz & Dekel, 2009; Silver et al., 2002). In the context of terrorism, acceptance as a way of coping was found to be associated with reduced levels of PTS symptoms (Nuttman-Shwartz & Dekel, 2009; Silver et al., 2002).

The studies investigating the association between ways of coping and PTG showed that both problem-focused and emotion-focused coping were positively associated with PTG (Linley & Joseph, 2004). Many studies consistently found that using active or problem-focused coping strategies facilitated PTG (Dirik & Karanci, 2008; Göral, Kesimci, & Gençöz, 2006; Gul & Karanci, 2017; Şenol-Durak & Ayvaşık, 2010;

Urcuyo et al., 2005; Schuettler & Boals, 2011). For example, a study with terror-exposed sample found that coping strategies of positive reframing and acceptance were associated with higher PTG in the long term (Butler et al., 2005). The same study also found a positive association between religious coping and only spiritual change dimension of PTG. Furthermore, a meta-analytic study of 103 studies indicated that religious coping was positively associated with PTG (Prati & Pietrantoni, 2009). However, as for emotion-focused coping, results are inconsistent. While few studies found a significant positive association between emotion-focused coping such as emotional social support or denial and PTG (Butler et al., 2005 Time1; Göral, Kesimci, & Gençöz, 2006), some others reported that emotion-focused coping such as distancing and escape coping was not associated with PTG (Frazier et al., 2001; Widows et al., 2005).

1.6 The Present Study

1.6.1 Purpose and Hypotheses of the Study

Since exposure to terror attacks in Turkey had become an ongoing reality of everyday life for many years, it is important to look at the psychological impact of these attacks on the exposed population. However, although the impact of terror attacks has been extensively studied in populations from countries such as United States, France, England, Israel, and Iraq, there are fewer studies conducted with Turkish samples (Aker et al., 2008; Eşsizoğlu et al., 2009; Eşsizoğlu et al., 2017; Page, Kaplan, Erdogan, & Guler, 2009). These existing few studies focused on only negative outcomes in relation to a single terror attack, which is insufficient to explain the situation in Turkey characterized with an ongoing threat of terrorism. As far as it is known, there were one recently published qualitative study that explored the posttraumatic growth as well as posttraumatic stress in indirect victims of terrorism in Turkey (Okay & Karanci, 2019). Therefore, the present study aims to close these gaps and provides an opportunity to simultaneously test the levels and the determinants of both PTS and PTG in the aftermath of repeated acts of terrorist bombings that occurred between June, 2015 and January, 2017 in Turkey. This thesis also focuses on those who were directly and indirectly exposed to terror attacks and examines the role of media exposure in relation to outcomes. As a result, the present study aims to examine

the associations of sociodemographic variables, mental health history, prior trauma, degree of terror exposure, level of media exposure, time that elapsed since the most distressing attack, world assumptions, event-related rumination, and coping in explaining participants' level of posttraumatic stress symptoms versus post traumatic growth. Accordingly, the hypotheses of the current study are as follows:

1) Pre-event factors, specifically female gender, younger age, lower education level, unemployment, presence of current psychiatric diagnosis, having previous trauma experience will be associated with higher levels of both PTS and PTG, and all of their subscales.
2) Event-related factors, namely higher number of terror attacks affecting the participants, less time that elapsed since the attack, higher degree of exposure to the most distressing attack, and higher level of media exposure to the details of the attack will predict higher scores on overall PTS and PTG, and all of their subscales.
3) More use of fatalistic and helplessness approaches of coping will be associated with higher scores on overall PTS and its three subscales.
4) More use of problem-focused and seeking social support approaches of coping will be associated with higher scores on overall PTG and its five domains.
5) More engagement in event-related intrusive rumination will predict higher levels of overall PTS and its three subscales.
6) More engagement in event-related deliberate rumination will predict higher scores on overall PTG and its five subscales.
7) More negative world assumptions will be associated with higher levels of PTS and its three subscales.
8) More positive world assumptions will be associated with greater levels of PTG and its five domains.
9) Higher scores on PTS symptom clusters will be associated with higher scores on overall PTG and its five domains.

CHAPTER 2

METHOD

2.1 Sample

The sample of the present study consisted of 305 adults from Turkey. Of the participants, 74.1% were women (*N* = 226) and 25.9% were men (*N* = 79). The ages of participants ranged between 18 and 58 (*M* = 26.38, *SD* = 7.12). The majority of the sample were single (*N* = 224, 73.4%) and most of the participants reported middle-income level (*N* = 182, 59.7%). In terms of the employment status, 46.2% of the participants (*N* = 141) were employed whereas 53.8% of them (*N* = 164) were unemployed. Most of the participants were university graduates (*N* = 141, 46.2%). In terms of the city they live at the time of the study, most of the participants were from Ankara (*N* = 175, 57.4%) and İstanbul (*N* = 63, 20.7%).

The mental health-related characteristics of the sample were also enquired. Forty-three (14.1%) of the participants reported a current psychiatric diagnosis. In terms of psychological treatment, 33.1% of participants (*N* = 101) reported a previous psychological treatment whereas 14.8% the sample (*N* = 45) reported an ongoing-treatment. More specifically, 5.2% of participants (*N* = 16) received psychological treatment after terror attacks. Moreover, the majority of the sample (*N* = 261, 85.6%) reported that they experienced at least one traumatic event throughout their lives prior to experiencing terror events. The most commonly experienced traumatic events were unexpected or sudden death of a loved one (*N* = 136, 44.6%), accident, fire, or explosion (*N* = 116, 38%), and natural disaster (*N* = 96, 31.5%). Detailed information about the sociodemographic characteristics and mental health related characteristics of the participants is presented in Table 2.1.

Table 2.1

Demographics and mental health-related characteristics of the sample

Variables	Frequency	Percentage (%)	Mean (SD)	Range
Age			26.38 (7.12)	18 - 58
Gender				
Female	226	74.1		
Male	79	25.9		
Education Level				
Primary School Graduate	4	1.3		
Middle School Graduate	2	0.7		
High School Graduate	103	33.8		
University Graduate	141	46.2		
Master/PhD	55	18		
Marital Status*				
Single/Divorced/Widowed	224	73.4		
Married/Cohabiting	81	26.6		
Employment Status				
Employed	164	53.8		
Unemployed	141	46.2		
Income Level**				
Low	16	5.2		
Middle-Low	51	16.7		
Middle	182	59.7		
Upper-Middle	53	17.4		
High	3	1		
Current City***				
Ankara	175	57.4		
Antalya	12	3.9		
Eskişehir	9	3		
İstanbul	63	20.7		
İzmir	13	4.3		
Other cities	33	10.7		
Current Psychiatric Diagnosis				
No	262	85.9		
Yes	43	14.1		
Current Treatment				
No	260	85.2		
Yes	45	14.8		
Previous Treatment				
No	204	66.9		
Yes	101	33.1		
N. of Previous Traumatic Events			2.18 (1.60)	0 - 7
No	44	14.4		
1	73	23.9		
2	70	23		
3	64	21		
4	26	8.5		
5 or more	28	9.2		

*'Single' category includes single (*N* = 217), divorced (*N* = 6), and widowed (*N* = 1) while 'Married' category includes both married (*N* = 64) and cohabiting (*N* = 17).

**As rated by the participant

***At the time of the study

Table 2.1 *(cont'd)*

Variables	Frequency	Percentage (%)
Types of Previous Traumatic Events		
Unexpected/sudden death of a loved one	136	44.6
Accident, fire, or explosion	116	38
Natural disaster	96	31.5
Sexual assault by a stranger	71	23.3
Non-sexual assault by a family member or	50	16.4
Other events	50	16.4
Sexual contact under age 18 with someone 5 or	37	12.1
Sexual assault by a family member or	32	10.5
Non-sexual assault by a stranger	30	9.8
Life-threatening illness	24	7.9
Combat or war zone	15	4.9
Torture	5	1.6
Imprisonment	3	1

2.2 Instruments

In this section, detailed information about the measurement tools used in this study will be presented. These tools were the Sociodemographic Information Form, Traumatic Event Checklist, World Assumptions Scale, Exposure to Terror Attack Inventory, The Impact of Event Scale – Revised, the Event-Related Rumination Inventory, Ways of Coping Inventory, and the Posttraumatic Growth Inventory.

2.2.1 The Sociodemographic Information Form

The Sociodemographic Information Form has been developed for the present study to gather basic descriptive information of the participants. Descriptive information includes age, gender, marital status, current city of residence, education level, employment status, job, income level (ranging from 1: low to 5: high), presence of current psychiatric diagnosis, and history of help for psychological problems. (See Appendix A for the Sociodemographic Information Form).

2.2.2 Traumatic Event Checklist

Traumatic Event Checklist is a part of the Posttraumatic Stress Diagnostic Scale (PDS) developed by Foa, Cashman, Jaycox, and Perry (1997). The translation and adaptation of the scale to Turkish was done by Işıklı (2006). PDS aims to assess posttraumatic

stress symptoms based on the criteria of the DSM-IV-TR (APA, 2000). The PDS consists of four sections, each evaluating different dimensions of experiencing traumatic events. From these parts, only the first part –i.e. Traumatic Event Checklist was used in the current study with the aim of identifying participants who had a traumatic experience besides experiencing terror events. In the checklist, twelve different traumatic events (natural disaster, accident, sexual or physical assault, etc.) are listed and the participants are asked to select the traumatic events that they have experienced throughout their life. Apart from these twelve events, the checklist also includes one open-ended option (a traumatic event other than the above) for those who experienced a traumatic event that is not in the list. In the present study, participants who selected at least one traumatic experience from the list were considered to have previous trauma and the number of events marked was taken as the number of previous traumatic experience. The Turkish version of the Traumatic Event Checklist is presented in Appendix B.

2.2.3 World Assumptions Scale (WAS)

World Assumptions Scale (WAS) is a self-report measurement, developed by Janoff-Bulman (1989) in order to assess the basic assumptions of people in the aftermath of traumatic experiences. The scale consists of 32 items rated on a 6-point scale ranging from 1 (strongly disagree) to 6 (strongly agree). Items 2, 8, 12, 18 and 31 are reverse coded. The factor structure of the scale was in line with the theoretical assumptions, with one exception: assumptions on the benevolence of the world and the benevolence of people appeared under the same factor instead of two separate factors. Thus, WAS has seven factors which were named as benevolence of the world, justice, controllability, randomness, self-worth, self-controllability and luck. Janoff-Bulman (1989) reported that the Cronbach's alphas for the factors vary between .66 and .76.

The scale was translated into Turkish by Yılmaz (2008). Contrary to seven factor structure of the original scale, the factor analysis of the Turkish version revealed six factors explaining %52.41 of the total variance. The first item was excluded from the scale since it did not load on any factor and items 1, 7, 11, 17 and 30 were reverse coded. The six factors of the Turkish version were named as benevolence of the world (6 items), justice (8 items), luck (4 items), randomness (6 items), self-worth (4 items),

and control (3 items). The internal consistency coefficients of subscales ranged between .85 and .13. The Cronbach's alpha value was .70 for the whole scale and the test-retest reliability coefficient was .58.

In the present study, the Turkish version of WAS was used to assess basic assumptions of the participants who were exposed to terror attacks. The Turkish translation of Yılmaz (2008), the 31-item version was used in the current study. Since Yılmaz's study (2008) revealed a somehow different factor structure from the original and had quite low internal consistency coefficients for some factors, the factor structure of WAS for the present sample was analyzed by using principal component analysis (PCA) with varimax rotation. The initial solution yielded 8 factors, explaining 63.85% of the variance. The examination of the scree plot, Eigen values and amount of explained variances suggested a six-factor solution. Therefore, PCA with varimax rotation was performed by forcing the factors into six. The analysis revealed six components explaining 56.58% of the variance (See Table 2 for the results of PCA). This six-factor structure was similar to the original structure proposed by Janoff-Bulman with the exception that controllability and justice emerged as a single factor instead of two separate factors. These six factors were labeled as *benevolence of the world* (e.g., "People are basically good and helpful.", "There is more than good than evil in the world."), *justice/controllability* (e.g., "Generally, people get what they deserve in this world.", "Through our actions we can prevent bad things from happening to us."), *luck* (e.g., "I am basically a luck person."), *randomness* (e.g., "The course of our lives are mostly determined by chance."), *self-control* (e.g. "I take the actions necessary to protect myself against misfortune."), and lastly *self-worth* (e.g., I am very satisfied with the kind of person I am.") The internal reliability coefficients were found to be .84 for the benevolence of the world, .79 for justice/controllability, .84 for luck, .76 for randomness, .72 for self-controllability, and .71 for self-worth. The Cronbach's alpha coefficient was found to be .82 for the whole scale. Mean scores for the whole scale and each factor were calculated. Higher scores mean more positive assumptions on the related category. (See Appendix C for WAS).

Table 2.2

Factor Loadings with Varimax rotation for Turkish form of WAS

Items	Factors					
	1	2	3	4	5	6
Factor 1: Benevolence						
Item 25	**.80**	.17	.12	.07	.03	.06
Item 8	**.74**	.28	.14	-.17	-.05	.15
Item 3	**.72**	.01	.03	-.15	.04	.02
Item 29	**.71**	.33	.16	-.01	.03	.13
Item 24	**.68**	.28	.18	.04	.03	.11
Item 4	**.66**	.31	.16	-.23	.01	.10
Item 11	**.54**	-.42	-.03	-.02	-.04	.08
Item 1	**.46**	-.22	-.02	-.07	.18	.08
Factor 2: Justice/Controllability						
Item 13	.11	**.65**	.31	-.02	.04	-.02
Item 10	-.02	**.64**	.11	-.23	.03	-.15
Item 18	.37	**.61**	.16	-.03	.06	.17
Item 19	.25	**.60**	-.16	.04	.21	.05
Item 28	.15	**.58**	-.05	-.17	.20	.01
Item 6	.01	**.58**	.29	-.04	-.01	.01
Item 21	.23	**.51**	-.06	-.01	.47	.17
Factor 3: Luck						
Item 15	.15	.11	**.85**	-.04	.09	.08
Item 9	.11	.08	**.84**	.04	.09	.03
Item 20	.15	.10	**.74**	.05	.14	.17
Item 31	.10	.10	**.62**	-.01	.12	.17
Factor 4: Randomness						
Item 14	-.10	-.05	-.05	**.83**	.13	-.06
Item 5	-.10	-.10	.13	**.78**	.05	-.12
Item 23	-.13	-.01	-.20	**.66**	.14	-.01
Item 2	-.07	-.24	.21	**.66**	-.02	-.08
Factor 5: Self-controllability						
Item 22	.04	.21	.04	-.04	**.76**	.05
Item 16	.06	.04	.03	.18	**.71**	-.06
Item 26	.06	.04	.25	.10	**.68**	-.07
Item 12	-.09	.09	.36	.12	**.54**	-.12
Factor 6: Self-worth						
Item 30	.02	-.05	-.01	-.17	.00	**.75**
Item 17	.22	.02	.20	-.13	-.19	**.70**
Item 7	.08	-.05	.02	.05	-.06	**.70**
Item 27	.28	.17	.24	-.05	.14	**.63**
Cronbach's Alpha	**.84**	**.79**	**.84**	**.76**	**.72**	**.71**
Explained Variance (%)	**13.27**	**10.64**	**10.07**	**8.02**	**7.51**	**7.08**
Total Explained Variance (%)			**56.58**			

2.2.4 Exposure to Terror Attack Inventory

Exposure to Terror Attack Inventory was developed for the present study in order to assess event-related characteristics of the participants (e.g. number of terror events selected as affecting, time elapsed after the most distressing event, type of exposure, and level of media exposure). This instrument is composed of three parts. The first part includes a chronological list of 33 terror attacks that harmed civilians and occurred between June, 2015 and March, 2017 in Turkey. Participants were asked to select the attack(s) that affected them and they were allowed to select more than one attack. The number of terror attacks selected as being affected was calculated by summing up the attacks the participants marked. If the participants marked more than one attack, they were next asked to identify the most distressing attack to them from the list of attacks they selected. After selecting the most distressing attack, participants were requested to complete the rest of the questionnaires by considering this particular attack. Time elapsed after the event was calculated as the time (months) from when the specified most distressing attack occurred until the measurement time.

The second part contained 8 yes-no questions to identify possible ways of exposure to the selected terror attack (See Table 2.3 for the items). Based on their characteristics, these eight items correspond to three types of possible exposure: personal exposure (item 2 and/or item 3), family/friend exposure with injury/loss (item 6 and/or item 7), and indirect exposure (item 1, item 4, item 5, and/or item 8).

Table 2.3

Items identifying the possible ways of exposure

Items
1. I was around but not witnessed the attack.
2. I was there at the time and witnessed the attack in person.
3. I was injured in the attack.
4. I thought something might have happened to a close friend/relative during the
5. A close friend/relative of mine was there at the time and witnessed the attack.
6. A close friend/relative of mine was injured in the attack.
7. I lost a close friend/relative in the attack.
8. I was exposed a lot to the details of the attack due to my job.

In the third part of the Exposure to Terror Attack Inventory, level of media exposure to the details of the attack was measured. Five different types of media tools (i.e., TV, radio, newspaper, social media, and the Internet) were presented and participants rated their level of attack-related exposure to each type of the media on a 5-point scale ranging from 0 (never) to 4 (very often). The Cronbach's alpha coefficient was found to be .64 for the scale of total media exposure. Mean scores for total media exposure and for each type of media exposure were calculated. The higher mean scores, the higher was the media exposure level on the related category. The Exposure to Terror Attack Inventory is presented in Appendix D.

2.2.5 The Impact of Event Scale – Revised (IES-R)

The Impact of Event Scale (IES) was firstly developed by Horowitz, Wilner, and Alvarez (1979) in order to assess the frequency of posttraumatic stress symptoms experienced during the last seven days since atraumatic event. The first version had 15 items rated on different frequency levels (0: Not at all; 1: Rarely, 3: Sometimes; 5: Often) and consisted of two subscales, namely intrusion and avoidance. Since IES was designed before the appearance of DSM-III (APA, 1980), intrusion and avoidance subscales were not sufficient in covering all the symptoms of PTSD. Therefore, Weiss and Marmar (1997) made several changes and revised the older version in accordance with DSM criteria. Firstly, they added six hyperarousal items and one more intrusion item to the original scale and this new 22-item version was named as The Impact of Event Scale – Revised (IES-R). Also, participants were asked to rate degree of distress caused by the symptom rather than frequencies of the symptoms as in the original version. Moreover, the response format was modified to a 5-point format (0: Not at all; 1: A little bit; 2: Moderately; 3: Quite a bit; 4: Extremely). Thus, IES-R consists of intrusion (8 items), avoidance (8 items) and hyperarousal (6 items) subscales. Weiss and Marmar (1997) reported the internal reliability coefficients as .87 for intrusion, .84 for avoidance, and .79 for hyperarousal subscales.

IES-R was translated into Turkish by Çorapçıoğlu, Yargıç, Geyran and Kocabaşoğlu (2006). As in the original version, the scale consists of 22 items and 3 subscales: intrusion (items 1, 2, 3, 6, 9, 14, 16, 20), avoidance (items 5, 7, 8 11, 12, 13, 17, 22) and hyperarousal (items 4, 10, 15, 18, 19, 21). The cross-measure correlations with

CAPS was reported to be .75 for the total scale and .67, .64, .49 for intrusion, avoidance and hyperarousal subscales, respectively. The Cronbach's alpha of the whole scale was .94.

In the present study, the Turkish version of IES-R (Çorapçıoğlu et al., 2006) was used to measure terror-related posttraumatic stress level of participants. Participants rated the 22 items on a 5-point scale ranging from 0 (not at all) to 4 (extremely) in respect to how distressing each item has been during the past seven days. The internal reliability coefficients were found to be .83 for intrusion, .68 for avoidance, and .78 for hyperarousal. The Cronbach's alpha value of the total scale was .88. Mean scores for the whole scale and each subscale were calculated and are presented in the results section. Higher scores indicate a greater impact of the event on the related dimension. The scale is presented in Appendix E.

2.2.6 The Event-Related Rumination Inventory (ERRI)

The Event-Related Rumination Inventory (ERRI) is a self-report inventory developed by Cann, Calhoun, Tedeschi, Triplett, Vishnevsky and Lindstrom (2011) in order to assess ruminative thoughts of people in the aftermath of a stressful event. The first part of the ERRI consists of 10 items measuring the degree of intrusive rumination and the second part includes 10 items measuring the degree of deliberate rumination. Participants are asked to rate all of the items on 4-point scales, ranging from 0 (never) to 3 (all the time). In Cann and his colleagues' study (2011), the internal consistencies were found to be .94 for intrusive and .88 for deliberate rumination subscales and the two factors explained 57% of the variance.

The Turkish translation and adaptation of the ERRI was done by Haselden (2014). The results of the factor analysis revealed a two-factor solution explaining 58% of the total variance. The first factor was labeled as intrusive (10 items) and the second factor was labeled as deliberate (10 items). The factor structure of the Turkish version was identical with the original scale. The internal consistencies were .94 for the whole inventory, .94 for intrusive rumination and .88 for deliberate rumination. In the present study, the Turkish version of ERRI was used in order to assess participants' ruminative thoughts in the aftermath of a terror attack. Mean scores for the two factors, namely intrusive and deliberate rumination were calculated. The internal consistencies were

.95 for intrusive rumination and .88 for deliberate rumination. The overall reliability of the scale was high (α = .94). (See Appendix F for ERRI).

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

Ways of Coping Inventory (WCI) is a self-report instrument, developed (1980) and revised (1985) by Folkman and Lazarus in order to assess the ways that people think and behave in stressful situations. The revised version of the scale (Folkman et al., 1986) includes 66 items rated on a 4-point scale ranging from 0 (not used) to 3 (used a great deal). The factor analysis of revised WCI revealed eight subscales, namely confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape/avoidance, planful problem solving, and positive reappraisal (Folkman et al., 1986). In their study, Folkman and her colleagues (1986) reported that alpha values of the eight subscales varied between .61 and .79.

The translation and adaptation of the WCI into Turkish was done by Siva (1991) with the inclusion of 8 new items about fatalism and superstitious beliefs that Turkish people tend to use to cope with stressful incidents. Siva (1991) reported that the factor analysis of this version revealed seven factors and the internal consistency of the whole scale was .90. In a study with earthquake survivors, 74 items of the Turkish version of WCI (WCI-T) were reduced to 60 and the response format was also changed from 4-point to 3-point scale (1: never; 2: sometimes; 3: always) (Karanci, Alkan, Akşit, Sucuoğlu & Balta, 1999). In Karanci and her colleagues' study (1999), the factor analysis suggested that 49 items had factor loadings above .35 and these 49 items produced five factors explaining 29.1% of the variance. These five factors were labeled as problem solving/optimistic, fatalistic, helplessness, social support and escape, with alpha coefficients ranging between .51 and .78. Later, Kesimci (2003) used the shortened 42-item version by taking the items which had factor loadings above .40 in Karanci et al.'s study (1999). In Kesimci's study, the factor analysis revealed four factors named as fatalistic coping (items 1, 2, 9, 10, 14, 15, 16, 20, 24, 29, 30, 33, 34, 37), optimistic/seeking social support coping (items 3, 4, 6, 7, 8, 21, 23, 27, 42), problem solving coping (items 5, 19, 22, 25, 28, 31, 38, 39, 41), and helplessness coping (12, 17, 26, 35, 36, 40). The Cronbach's alpha values were reported as .90 for

fatalistic coping, .76 for optimistic/seeking social support coping, .81 for problem solving coping, and .78 for helplessness coping.

In the present study, the 42-item version and four factor solution of WCI-T (Kesimci, 2003) was used in order to assess the coping strategies of people in the aftermath of terror attacks. Participants rated the items on a 3-point scale (1 = never; 2 = sometimes; 3 = always). Reliability analysis for the current sample revealed Cronbach's alpha value of .72 for the whole scale. The internal reliability coefficients were .77 for fatalistic coping, .65 for optimistic/seeking social support coping, .77 for problem solving coping, and .73 for helplessness coping. Mean scores for each subscale were calculated and presented in the results section. Higher scores indicate the more use of coping styles on the related category (See Appendix G for WCI-T).

2.2.8 The Posttraumatic Growth Inventory (PTGI)

The Posttraumatic Growth Inventory (PTGI) is a self-report inventory, developed by Tedeschi and Calhoun (1996) to assess the positive changes people perceive in the aftermath of traumatic life events. The scale consists of 21 items rated on a 6-point scale ranging from 0 ("I did not experience this change as a result of my crisis") to 5 ("I experienced this change to a very great degree as a result of my crisis"). The factor analysis of the original scale suggested a five-factor solution explaining 62% of the variance. The factors were labeled as relating to others, new possibilities, personal strength, spiritual change, and appreciation of life. In their study, Tedeschi and Calhoun (1996) reported acceptable construct validity and high internal consistency for the whole scale (α = .90). The Cronbach's alpha coefficients of the subscales ranged between .67 and .85 and test-retest reliability coefficient was .71.

PTGI was translated into Turkish firstly by Kılıç (2005) (as cited in Dirik, 2006) with some modifications. He used a 4 factor structure and changed the response format to a 5-point scale. Later, Dirik (2006) also translated the scale into Turkish by comparing it with the Kılıç's translation and the response format remained as a 6-point scale as in the original PTGI. In Dirik's study (2006), the factor analysis yielded three factors: change in interpersonal relations, change in philosophy of life and change in personal strength, with internal consistency coefficients of .86, .87, and .88, respectively. The Cronbach's alpha value for the whole scale was .94.

In their study with a community sample, Karanci, Aker et al. (2012) used the Turkish translation (Dirik, 2006) and obtained a five-factor solution as in the original version, with an exception of two items (item 15 and 16) loading on the spiritual change factor instead of relating to others. The Cronbach's alpha of the whole scale was .93. The internal consistency coefficients of these five factors were .81 for new possibilities, .76 for spiritual change, .79 relating to others, .79 for personal strength, and .83 for appreciation of life.

In the present study, The Turkish translation of PTGI (Dirik, 2006) was used in order to assess the degree of positive changes of the participants in the aftermath of the terror attack. Five-factor structure of Karanci, Aker et al. (2012) was used and the results of reliability analysis for the present sample revealed high internal consistency for the whole scale (α = .93). The internal consistency coefficients were .83 for new possibilities, .76 for spiritual change, .83 relating to others, .78 for personal strength, and .89 for appreciation of life. Mean scores for the whole scale and each factor were calculated and are presented in the results section. (See Appendix H for PTGI).

2.3 Procedure

Ethical permission to conduct the study was taken from the Applied Ethics Research Center of Middle East Technical University (see Appendix I). For data collection, instruments of the present study along with informed consent were entered into an online data collection platform (www.qualtrics.com). The call for attendance to the study was done via social media and e-mail groups, targeting those who are above 18 years old and living in Turkey. Participants who read and approved the informed consent (see Appendix J) proceeded respectively with Sociodemographic Information Form, Traumatic Event Checklist, World Assumptions Scale, Exposure to Terror Attack Inventory. The Impact of Event Scale – Revised, the Event-Related Rumination Inventory, Ways of Coping Inventory, and the Posttraumatic Growth Inventory. After selecting the most disturbing terror attack in Exposure to Terror Attack Inventory, participants were asked to fill the remaining measurements by considering the selected attack. Administration of the measurements took approximately 30 minutes and a debriefing form was provided for the participants in the end of the study (See Appendix K for the Debriefing Form). The debriefing form also included a link to an

informational sheet prepared by Turkish Psychological Association about the psychosocial impact of traumatic life events and how to cope with them. Data collection was conducted between February-March, 2017. A total of 483 adults from Turkey initially responded to the research call for the study. However, one hundred and seventy-one of the participants (35.4%) were excluded from the dataset since they did not complete the whole questionnaire set. Five of the remaining 312 participants did not select any terror attack as disturbing and they were also excluded from the data set since the number of this group is very low for any comparison. Two of the remaining 307 participants were identified as outliers and removed from further analysis. Hence, the main statistical analyses were conducted with the remaining 305 participants.

Statistical analyses of the data were conducted with Statistical Package for the Social Sciences (SPSS), version 24. Prior to the main analyses, missing values, accuracy of data entry, outliers and assumptions of analyses (i.e., normality, linearity, homoscedasticity, multicollinearity) were examined. Multivariate outliers were identified by calculating Mahalanobis' distance. A factor analysis was conducted for WAS via Principal Component Analysis with varimax rotation. Internal reliabilities of the measurement tools and their subscales were assessed by Cronbach's alpha coefficients. Then, descriptive statistics for study instruments and their subscales were calculated. Bivariate correlations of study variables were also analyzed. Finally, ten hierarchical multiple regression analyses were performed to determine the predictors of PTS, PTG, and all of their subscales. The results of the analyses are presented in the next chapter.

CHAPTER 3

RESULTS

The results section of the current study will be presented in three parts. In the first part, descriptive statistics will be presented. The second part will include bivariate correlations among variables of the study. In the final part, results of the hierarchical multiple regression analyses for PTS, PTG and their subscales will be presented.

3.1 Descriptive Statistics

3.1.1 Descriptives for Measures of Exposure to Terror Attacks

According to the results of descriptive analysis, the majority of the initial 310 participants (*N* = 305, 98.4%) reported that they were affected by at least one terror attack from the given list. The analyses of the present study were conducted with these 305 participants. The majority of the participants marked four or more terror attacks as affecting them (*N* = 256, 83.9%). The mean number of terror attacks that the participants marked as affecting was 7.16 (*SD* = 4.32). The distribution of the number of selected terror attacks is presented in Table 3.1.

Table 3.1

Descriptives for the number of terror attacks selected as distressing

	Frequency (%) (*N* = 310)	Frequency (%) (*N* = 305)	Mean (SD) (*N* = 305)
Being affected from at least one attack	305 (98.4%)		
Number of the selected terror attacks			7.16 (4.32)
3 or less		49 (16.1%)	
4		30 (9.8%)	
5		43 (14.1%)	
6		36 (11.8%)	
7		33 (10.8%)	
8 or more		114 (37.4%)	

How often each terrorist attack was marked as affecting the participants is presented in Table 3.2. As can be seen from the table, the most commonly selected terror attacks were Ankara Güvenpark Bus Station Attack (*N* = 249, 81.6%), Ankara Train Station Attack (*N* = 243, 79.7%), and 15 July Coup Attempt (N = 194, 63.6%).

Table 3.2

Frequency and percentage of each terror attack being marked as affecting (N = 305)

Terror Attacks*	**Frequency (%)**
Ankara Güvenpark Bus Station Attack	249 (81.6%)
Ankara Train Station Attack	243 (79.7%)
15 July Coup Attempt	194 (63.6%)
İstanbul Ortaköy Nightclub Attack	180 (59.0%)
İstanbul Atatürk Airport Attack	168 (55.1%)
İstanbul Beşiktaş Attacks	132 (43.3%)
İzmir Bayraklı Courthouse Attack	126 (41.3%)
Şanlıurfa Suruç Attack	108 (35.4%)
Ankara Merasim Road Attack	100 (32.8%)
İstanbul İstiklal Street Attack	90 (29.5%)
İstanbul Sabiha Gökçen Airport Attack	78 (25.6%)
Gaziantep Road Wedding Attack	74 (24.3%)
Kayseri Attack	67 (22.0%)
İstanbul Sultanahmet Attack	58 (19.0%)
İstanbul Vezneciler Attack	48 (15.7%)
Diyarbakır HDP Rally Attack	39 (12.8%)
İstanbul Sultanbeyli Police Centre Attack	23 (7.5%)
Diyarbakır Bağlar Police Building Attack	20 (6.6%)
Hakkâri Şemdinli Gendarmerie Station Attack	19 (6.2%)
Gaziantep Police Department Attack	18 (5.9%)
Bursa City Centre Attack	17 (5.6%)
Adana Governorship Parking Lot Attack	17 (5.6%)
İstanbul Yenibosna Attack	16 (5.2%)
Diyarbakır Çınar Police Department Attack	15 (4.9%)
Elazığ Police Department Attack	14 (4.6%)
Şırnak Cizre Police Department Attack	14 (4.6%)
İstanbul Sancaktepe Attack	12 (3.9%)
Diyarbakır Bağlar Attack	11 (3.6%)
Diyarbakır Coach Station	9 (3.0%)
Diyarbakır Dürümlü Village Attack	7 (2.3%)
Mardin Midyat Attack	7 (2.3%)
Mardin Derik Governorship Building Attack	7 (2.3%)
Mardin Kızıltepe Attack	5 (1.6%)

*Participants were allowed to select more than one attack

From the list of the attacks that they have marked as affecting, participants were asked to choose the one that was the most distressing for them. In total, eleven different attacks were chosen as the most distressing by the participants. The frequencies and percentages of terror attacks being selected as the most distressing attack by the participants are presented in Table 3.3. According to the results, Ankara Güvenpark Bus Station Attack (N = 90, 29.5%), 15 July Coup Attempt (N = 84, 27.5%), and Ankara Train Station Attack (N = 67, 22%) were the most commonly selected events as the most distressing attacks.

Table 3.3

Frequencies and percentages of terror attacks being selected as the most distressing

Terror Attacks	**Frequency (%)**
Ankara Güvenpark Bus Station Attack	90 (29.5%)
15 July Coup Attempt	84 (27.5%)
Ankara Train Station Attack	67 (22.0%)
İstanbul Ortaköy NightClub Attack	13 (4.3%)
İstanbul Beşiktaş Attacks	13 (4.3%)
Şanlıurfa Suruç Attack	10 (3.3%)
İstanbul Atatürk Airport Attack	7 (2.3%)
Ankara Merasim Road Attack	7 (2.3%)
İzmir Bayraklı Courthouse Attack	6 (2.0%)
İstanbul İstiklal Street Attack	5 (1.6%)
Gaziantep Road Wedding Attack	3 (1.0%)
Total	305 (100%)

The distribution of responses regarding the ways of exposure to the most distressing attack were examined and presented in Table 3.4. As shown in the table, the vast majority of the participants (77%, N = 235) reported that they thought that something might have happened to their close friends/relatives during the attack while thirty participants (9.8%) reported that they witnessed the attack in person. Also, 42.3% of the participants (N = 129) had family/friends witnessed the attack without injury/loss whereas 13.4% reported injury or loss of a family member/friend in the attack (N = 41).

Based on the answers to the possible eight ways of exposure to the most distressing terror attack, initially, five categories of exposure types were determined as follows: both personal and family/friend exposure (4), only personal exposure (3), only family/friend exposure (2), only indirect exposure (1), no exposure except for media (0). However, since there were no significant differences between the first three categories on PTS and PTG scores, they were combined. As a result, a three-category variable named as 'types of exposure' was created: no exposure except for media (0), only indirect exposure (1), personal and/or family/friend exposure which is named as direct exposure (2). No exposure category includes those who did not select any item regarding the presented ways of the exposure but reported media exposure. Only indirect category corresponds to those who selected at least one of the items of indirect exposure but not selected any items of direct exposure. Direct exposure group consists of those who selected at least one of the items of direct exposure. It should be noted that all of the directly exposed group also reported indirect ways of exposure. The frequencies and percentages of all three exposure types (i.e., no exposure except for media, indirect exposure and direct exposure) were calculated and presented in Table 3.4. According to the results, 13.1% (N = 40) of the participants reported no exposure except for media while 23.6% of the participants (*N* = 72) reported direct exposure to the attack. The rest of the participants reported only indirect exposure to the attack (63.3%, *N* = 193). Lastly, descriptives for time elapsed after the attack, number of selected terror attacks, and the level of media exposure to terror attack were also calculated and presented in Table 3.4. According to the results, the most frequently used media tools to follow the details regarding the most distressing attack were social media (*M* = 3.69, *SD* = .64), the Internet (*M* = 3.59, *SD* = .74), and TV (*M* = 3.06, *SD* = 1.28) while the least frequently used ones were radio (*M* = .94 *SD* = 1.34) and newspaper (*M* = 1.92, *SD* = 1.51).

Table 3.4

Descriptives for exposure-related characteristics (N = 305)

	Frequency (%)	Mean (SD)	Possible range
Ways of Exposure Items*			
Items of Indirect Exposure			
Expected danger for family/friend	235 (77.0%)		
Family/friend witnessed	129 (42.3%)		
Around but not witnessed	125 (41.0%)		
Exposed to details due to work	54 (17.7%)		
Items of Direct (Personal or Family/Friend) Exposure			
Family/friend injured	41 (13.4%)		
Witnessed in person	30 (9.8%)		
Loss of family/friend	29 (9.5%)		
Injured	3 (1.0%)		
Types of Exposure			
No exposure except for media	40 (13.1%)		
Only Indirect Exposure	193 (63.3%)		
Direct Exposure	72 (23.6%)		
Time elapsed after the attack**		11.26 (4.45)	3 - 21
Number of selected terror attacks		7.16 (4.32)	1 - 33
Psychological help due to attack	16 (5.2%)		
Media Exposure to the attack			
Total media exposure		2.64 (.73)	0 - 4
TV		3.06 (1.28)	0 - 4
Radio		.94 (1.34)	0 - 4
Newspaper		1.92 (1.51)	0 - 4
The Internet		3.59 (.74)	0 - 4
Social media		3.69 (.64)	0 - 4

*Participants were allowed to select more than one item.

**Calculated as number of months passed since the most distressing attack until the measurement time.

3.1.2 Descriptives for Main Measures of the Study

Means and standard deviations of the main measures of the present study are presented in Table 3.5. Also, possible ranges for each measure were provided.

Table 3.5

Descriptive statistics for the main measures of the study (N = 305)

Measures	**Mean (SD)**	**Possible Range**
World Assumptions		
Total score	3.53 (.54)	1 - 6
Benevolence	3.45 (.96)	1 - 6
Justice/Controllability	3.01 (.90)	1 - 6
Luck	3.55 (1.16)	1 - 6
Randomness	3.27 (1.11)	1 - 6
Self-control	3.95 (.93)	1 - 6
Self-worth	4.39 (.99)	1 - 6
Ways of Coping		
Fatalistic coping	1.85 (.31)	1 - 3
Problem-solving coping	2.49 (.31)	1 - 3
Helplessness coping	2.00 (.41)	1 - 3
Seeking social support/Optimistic	2.35 (.28)	1 - 3
Event-Related Rumination		
Intrusive rumination	1.71 (.88)	0 - 3
Deliberate rumination	1.54 (.72)	0 - 3
PTS		
Total PTS score	1.17 (.62)	0 - 4
Intrusion	1.03 (.73)	0 - 4
Avoidance	1.24 (.66)	0 - 4
Hyperarousal	1.28 (.83)	0 - 4
PTG		
Total PTG score	1.80 (1.00)	0 - 5
New possibilities	1.62 (1.13)	0 - 5
Spiritual change	1.75 (1.22)	0 - 5
Relating to others	1.66 (1.15)	0 - 5
Personal strength	1.63 (1.18)	0 - 5
Appreciation of life	2.61 (1.42)	0 - 5

3.2 Bivariate Correlations Among the Study Variables

Bivariate correlations among the study variables are presented in Table 3.6. Of the major outcome variables of the study, total PTS score was negatively correlated with education level (r = -.13, p < .05), benevolence of the world assumption (r = -.20, p < .01), and assumption of self-worth (r = -.15, p < .01) whereas it was positively

correlated with being female (r = -.19, p < .01), having previous trauma experience (r = .16, p < .01), assumption of self-control (r = .13, p < .05), number of selected terror attacks (r = .14, p < .05), being directly exposed to the attack (r = .13, p < .05), level of total media exposure (r = .25, p < .01), deliberate rumination (r = .45, p < .01), intrusive rumination (r = .61, p < .01), and helplessness coping (r = .26, p < .01). Total PTS score was also positively correlated with the other outcome variable PTG (r = .30, p < .01) and its five domains, namely new possibilities (r = .33, p < .01), spiritual change (r = .19, p < .01), relating to others (r = .23, p < .01), personal strength (r = .18, p < .01), and appreciation of life (r = .29, p < .01).

As for the other outcome variable total PTG score, it was positively correlated with having previous trauma experience (r = .13, p < .05), benevolence of the world assumption (r = .15, p < .01), assumption of justice/controllability (r = .25, p < .01), self-control (r = .15, p < .01), and self-worth (r = .14, p < .05), being directly or indirectly exposed to the attack (r = .16, p < .05), level of total media exposure (r = .15, p < .01), deliberate rumination (r = .40, p < .01), intrusive rumination (r = .21, p < .01), fatalistic coping (r = .30, p < .01), problem solving coping (r = .26, p < .01), seeking social support/optimistic coping (r = .30, p < .01). Total PTG score was also positively correlated with the three domains of PTS: intrusion (r = .30, p < .01), avoidance (r = .26, p < .01) and hyperarousal (r = .19, p < .01).

Table 3.6

Bivariate correlations among the variables of the study (continues in the next page)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1.	Age	1																
2.	Gender[a]	.07	1															
3.	Education Level	.32**	-.08	1														
4.	Employment[b]	.37**	.07	.52**	1													
5.	Psychiatric problem[b]	.03	-.09	.03	.04	1												
6.	Previous trauma[b]	.01	-.08	.01	.06	.06	1											
7.	Current psy. Help[b]	.01	-.16**	.17**	.08	.50**	.04	1										
8.	Benevolence	.28**	.08	.08	.09	-.11	-.11	-.10	1									
9.	Justice/Controllability	.13*	.19**	.03	.07	-.06	-.08	-.12*	.39**	1								
10.	Luck	.08	.00	.10	.04	-.08	-.09	-.06	.30**	.30**	1							
11.	Randomness	-.20**	-.08	-.05	.04	.05	.22**	.06	-.22**	-.23**	.01	1						
12.	Self-control	.00	-.05	.04	-.01	.00	.03	-.07	.09	.31**	.29**	.20**	1					
13.	Self-worth	.34**	.03	.22**	.18**	-.26**	-.04	-.16**	.34**	.14*	.25**	-.21**	-.05	1				
14.	Total WAS	.23**	.08	.12*	.13*	-.14*	-.05	-.15*	.73**	.68**	.65**	.07	.50**	.45**	1			
15.	N of Terror Attacks	.04	-.03	.00	-.01	-.03	.09	.00	.02	-.03	-.04	.01	-.05	.03	-.01	1		
16.	Time after attack	.03	-.01	.01	.00	.10	.11	.04	-.10	-.07	-.04	.12*	.03	-.01	-.05	-.04	1	
17.	Exposure[c]	-.16**	-.04	-.12*	-.05	.05	.15*	.03	.05	.06	.02	-.14*	-.13*	-.04	.11	.06	.13*	1
18.	Direct exposure[d]	-.09	.01	-.13*	-.05	.04	.05	-.01	.03	.02	.00	.08	.08	.01	.06	.02	.07	.22*
19.	Total Media Exp.	.05	-.10	-.02	.10	.06	.10	-.03	-.10	-.06	-.12*	.00	-.01	-.02	-.11	.10	.04	.12*
20.	Deliberate rumination	-.07	-.22**	-.05	-.02	.03	.12*	.07	-.07	-.02	-.01	.10	.10	-.02	.00	.11	.12*	.26**
21.	Intrusive rumination	-.10	-.32**	.01	.00	.15**	.23**	.15**	-.19**	-.16**	-.03	.17**	.10	-.20**	-.14*	.18**	.15**	.23**
22.	Fatalistic Coping	.01	-.08	-.08	.00	-.02	-.07	-.10	.18**	.22**	.10	-.02	.08	-.05	.19**	.01	-.25**	.05
23.	Helplessness coping	-.19**	-.16**	-.10	-.10	.19**	.14*	.16**	-.35**	-.20**	-.25**	.30**	.02	-.50**	-.34**	-.02	.08	.12*
24.	Prob.Solving Coping	.20**	.06	-.10	.08	-.18**	.01	-.14*	-.27**	.29**	.35**	-.13*	.25**	.36**	.44**	.05	-.02	.03
25.	Soc.Supp./Optimistic	.23**	.07	.19**	.12*	-.18**	-.03	-.08	.36**	.31**	.37**	-.08	.24**	.36**	.49**	.04	.03	.05
26.	Intrusion	.01	-.15**	-.15*	-.05	.07	.16**	-.03	-.12*	.02	-.03	.05	.09	-.09	-.04	.19**	.04	.09
27.	Avoidance	-.05	-.16**	-.07	-.05	-.05	.10	-.07	-.13*	.00	.04	.08	.17**	-.09	-.02	.03	.01	.10
28.	Hyperarousal	-.05	-.18**	-.11	-.09	.13*	.15**	.14*	-.28**	-.14*	-.04	.14*	.09	-.21**	-.18**	.14*	.14*	.08

Table 3.6 *(cont'd)*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
29. Total PTS	-.04	-.19**	-.13*	-.07	.06	.16**	.01	-.20**	-.04	-.01	.10	.13*	-.15**	-.09	.14*	.07	.11
30. New Possibilities	.01	-.05	-.08	-.04	-.08	.11**	-.12*	.09	.23**	.09	-.02	.16**	.11	.21**	.08	.05	.13*
31. Spiritual Change	-.06	-.13*	-.22**	-.15**	-.07	.04	-.17**	.15**	.18**	.03	-.10	.08	.06	.15**	.05	-.06	.13*
32. Relating to Others	.06	-.07	-.06	-.02	.00	.11	-.03	.14*	.16**	.05	-.04	.07	.10	.17**	.02	.06	.15*
33. Personal Strength	.15**	.01	-.01	.05	-.03	.11	-.03	.15**	.27**	.08	-.04	.14*	.17**	.26**	.05	-.11	.10
34. Appreciation Of Life	-.08	-.10	-.08	-.08	-.06	.15**	-.11	.07	.17**	.13*	.08	.20**	.14*	.23**	.02	-.06	.13*
35. Total PTG	.02	-.08	-.11	-.06	-.06	.13*	-.11	.15**	.25**	.09	-.03	.15**	.14*	.24**	.06	-.02	.16*

	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
18. Direct exposure[b]	1																	
19. Total Media	.11*	1																
20. Deliberate	.09	.28**	1															
21. Intrusive rumination	.11	.22**	.59**	1														
22. Fatalistic Coping	-.03	.02	.06	-.04	1													
23. Helplessness coping	.05-	.12*	.17**	.32**	.18**	1												
24. Prob.Solving Coping	.03	-.08	.11	-.07	.03	-.50**	1											
25. Soc.Supp./Optimistic	-.02	-.04	.11	-.07	.13*	-.42**	.68**	1										
26. Intrusion	.19**	.28**	.40**	.54**	.05	.19**	.02	.03	1									
27. Avoidance	.02	.16**	.34**	.43**	.11	.21**	.00	.06	.49**	1								
28. Hyperarousal	.10	.19**	.43**	.58**	-.07	.29**	-.09	-.08	.73**	.54**	1							
29. Total PTS	.13*	.25**	.45**	.61**	.04	.26**	-.03	.01	.88**	.79**	.88**	1						
30. New Possibilities	.07	.11	.40**	.19*	.20**	.00	.27**	.28**	.31**	.31**	.23**	.33**	1					
31. Spiritual Change	.03	.10	.31**	.12*	.43**	.11*	.14*	.18**	.21**	.15**	.11	.19**	.65**	1				
32. Relating to Others	.04	.16**	.34**	.22**	.16**	.10	.16**	.23**	.27**	.16**	.15**	.23**	.63**	.63**	1			
33. Personal Strength	.10	.16**	.31**	.10	.29**	-.11	.29**	.33**	.24**	.15**	.06	.18**	.70**	.57**	.61**	1		
34. Appreciation Of Life	.01	.10	.30**	.22**	.20**	.04	.26**	.22**	.23**	.29**	.21**	.29**	.64**	.57**	.51**	.56**	1	
35. Total PTG	.06	.15**	.40**	.21**	.30**	.04	.26**	.30**	.30**	.26**	.19**	.30**	.88**	.83**	.83**	.83**	.77**	1

** p < .01 (2-tailed), * p < .05 (2-tailed)

[a] Female: 0, Male: 1; [b] No: 0, Yes: 1; [c] No exposure: 0, Exposure (indirect or direct): 1; [d] No direct exposure:0, direct exposure: 1

3.3 Hierarchical Multiple Regression Analyses

In the present study, a set of hierarchical multiple regression analyses was performed in order to examine the predictors of PTS, PTG and all of their subscales. Therefore, in total, ten separate hierarchical multiple regression analyses were conducted to examine the effects of pre-event variables, event-related variables, coping, rumination, and world assumptions on outcome variables. Among the pre-event variables, only those which had significant bivariate correlations with the outcome variables were included in the regression analyses. Before the analyses, since type of exposure has three categories, it was coded as two dummy variables: 'dummy exposure' (no exposure except for media: 0 versus indirect or direct exposure: 1) and 'dummy direct exposure' (no direct exposure: 0 versus direct exposure: 1). Next, results of the separate analyses for each criterion variable will be presented.

3.3.1 Predictors of PTS

A hierarchical multiple regression analysis was performed in order to reveal significant predictors of posttraumatic stress (PTS) symptoms. As demonstrated in Table 3.7, the variables were entered into the equation in four steps. The sociodemographic variables (i.e., age, gender, education level and employment status), presence of previous trauma, status of current psychiatric diagnosis and current psychological help were labeled as control variables and entered into the equation in the first step. In the second step, event-related factors (i.e., number of terror attacks selected as affecting, time elapsed since the most distressing attack, type of exposure and level of total media exposure) were added to the equation via stepwise method. Following the second step, coping variables (i.e., fatalistic, helplessness, problem-solving, seeking social support/optimistic) and rumination variables (i.e., deliberate and intrusive) were entered into the equation via stepwise method. In the fourth and the final step, dimensions of world assumptions (i.e., benevolence of the world, justice/controllability, randomness, luck, self-worth, and self-control) were included in the equation.

Table 3.7

Steps of the hierarchical multiple regression analyses for PTS and its subscales

Variables	Method
I. Pre-event Variables (Control Variables)	Enter
Age	
Gender (0: Female; 1: Male)	
Education Level	
Employment (0: Employed; 1: Not employed)	
Current Psychological Help (0: No, 1: Yes)	
Current Psychiatric Diagnosis (0: No, 1: Yes)	
Previous Trauma (0: No, 1: Yes)	
II. Event-related Variables	Stepwise
Time elapsed since attack	
Number of terror attacks	
Type of Exposure	
Level of Total Media Exposure	
III. Post-event Variables	Stepwise
Ways of Coping	
Problem-Solving	
Seeking Social Support/Optimistic	
Fatalistic	
Helplessness	
Event-Related Rumination	
Intrusive	
Deliberate	
IV. World Assumptions	Stepwise
Benevolence of the world	
Justice/Controllability	
Randomness	
Luck	
Self-worth	
Self-control	

According to the results, with all variables in the equation, in the last step, 43% (adjusted R^2 = .40) of the variance in total PTS score was explained by some of the variables in the equation (F (11, 293) = 19.70, p < .001). Pre-event variables explained eight percent of the variance in posttraumatic stress symptoms in the first step (F (7, 297) = 3.81, p < .01). Among those variables, female gender (β = -.20; t = -3.46, p < .01), education level (β = -.15; t = -2.25, p < .05), and having previous trauma experience (β = .14; t = 2.53, p < .05) were significantly associated with PTS.

When event-related variables were entered into the equation, the explained variance reached 13% (R^2 *change* = .04, *F change* (1,296) = 15.02, $p < .001$). Among them, only the level of total media exposure appeared to be a significant predictor of PTS (β = .22; t = 3.88, $p < .001$). With the entrance of coping and rumination variables into the equation in the third step, the explained variance increased to 41% (R^2 *change* = .28, *F change* (1,295) = 139.03, $p < .001$). From these variables, only intrusive rumination significantly predicted PTS (β = .59; t = 11.79, $p < .001$).

Among the dimensions of world assumptions, benevolence of the world assumption negatively predicted PTS (β = -.11; t = -2.11, $p < .05$) and its inclusion to the equation increased the explained variance to 42% (R^2 *change* = .01, *F change* (1,294) = 4.46, $p < .05$). Furthermore, assumption of justice/controllability positively predicted PTS (β = .11; t = 2.24, $p < .05$) and with its inclusion, the explained variance reached 43% (R^2 *change* = .01, *F change* (1,293) = 5.02, $p < .05$).

When all the variables were in the equation in the last step, age (β = .11; t = 2.12, $p < .05$), education level (β = -.13; t = -2.47, $p < .05$), level of total media exposure (β = .10; t = 2.21, $p < .05$), intrusive rumination (β = .58; t = 11.72, $p < .001$), benevolence of the world assumption (β = -.14; t = -2.782, $p < .01$), and assumption of justice/controllability (β = .11; t = 2.24, $p < .05$) remained as the significant predictors of PTS (See Table 3.8 for the summary of the results for total PTS score).

Table 3.8
Findings of the hierarchical multiple regression analysis for PTS

Block	β (within set)	t (within set)	β (last step)	t (last step)	R^2 change	Model R^2
Dependent Variable: PTS						
I. Pre-event variables					.08	.08
Age	.03	.41	.11	2.12*		
Female Gender	-.20	-3.46***	-.04	-.72		
Education Level	-.15	-2.25*	-.13	-2.47*		
Having Previous Trauma	.14	2.53*	.01	.22		
II. Event-related variables						.13
Total Media Exposure	.22	3.88***	.10	2.21*	.04	
III. Post-event Variables						.41
Intrusive Rumination	.59	11.79***	.58	11.72***	.28	
IV. World Assumptions						.43
Benevolence	-.10	-2.11*	-.14	-2.78**	.01	
Justice/Controllability	.11	2.24*	.11	2.24*	.01	

$^{***}p < .001$, $^{**}p < .01$, $^{*}p < .05$

3.3.1.1 Predictors of PTS subscales

In order to examine the significant predictors of PTS subscales, three hierarchical multiple regression analyses for each PTS subscale (i.e., intrusion, hyperarousal, avoidance) were performed via the same steps as presented previously in Table 3.7.

3.3.1.1.1 Intrusion

According to the results of the hierarchical multiple regression analysis for intrusion, with all variables in the equation, in the last step, 39% (adjusted R^2 = .36) of variability in intrusion was explained by some of the variables in the equation (F (12, 292) = 15.37, p < .001). The pre-event variables, labeled as control variables, explained 8% of the variance in intrusion in the first step (F (7, 297) = 3.91, p < .01). Among those variables, female gender (β = -.17; t = -2.98, p <.01), education level (β = -.19; t = -2.87, p <.01), and having previous trauma (β = .14; t = 2.49, p <.05) were found to be significant associates of intrusion.

From event-related variables, level of total media exposure was found to be positively associated with intrusion score (β = .24; t = 4.39, p < .001) and its entrance to the equation incremented the explained variance to 14% (R^2 *change* = .06, *F change* (1,296) = 19.30, p < .001). Moreover, number of terror events selected as having affected them significantly predicted intrusion score (β = .15; t = 2.82, p < .01) and its inclusion to the equation increased the explained variance to 16% (R^2 *change* = .02, *F change* (1,295) = 7.94, p < .01). Lastly, being directly exposed to the attack (no exposure except for media or indirect exposure: 0, direct exposure: 1) was found to be associated with intrusion (β = .14; t = 2.64, p < .01) and its entrance to the equation increased the explained variance to 18% (R^2 *change* = .02, *F change* (1,294) = 6.95, p < .01).

In terms of coping and rumination variables, only intrusive rumination was found to be the predictor of intrusion (β = .50; t = 9.56, p < .001) and with its inclusion to the equation, the explained variance improved to 38% (R^2 *change* = .19, *F change* (1,293) = 91.38, p < .001). As for the world assumptions added in the last step, only assumption of justice/controllability was significantly associated with intrusion (β = .11; t = 2.22,

$p < .05$) and its addition to the equation increased the explained variance to 39% (R^2 *change* = .01, *F change* (1,292) = 4.93, $p < .05$).

With all the variables in the equation, in the last step, age ($\beta = .10$; $t = 2.03$, $p < .05$), education level ($\beta = -.16$; $t = -2.87$, $p < .01$), level of total media exposure ($\beta = .14$; $t = 2.88$, $p < .01$), direct exposure ($\beta = .10$; $t = 2.12$, $p < .05$), intrusive rumination ($\beta = .51$; $t = 9.76$, $p < .001$), and assumption of justice/controllability ($\beta = .11$; $t = 2.22$, $p < .05$) remained as the significant predictors of intrusion. Table 3.9 summarizes the findings of the hierarchical multiple regression analysis for intrusion subscale.

Table 3.9

Findings of the hierarchical multiple regression analysis for intrusion

Block	*β* (within set)	*t* (within set)	*β* (last step)	*t* (last step)	R^2 change	Model R^2
Dependent Variable: Intrusion						
I. Pre-event variables					.08	.08
Age	.07	1.11	.10	2.03*		
Female Gender	-.17	-2.98**	-.03	-.52		
Education Level	-.19	-2.87**	-.16	-2.87**		
Having Previous Trauma	.14	2.49*	.02	.45		
II. Event-related variables						.18
Total Media Exposure	.24	4.39***	.14	2.88**	.06	
Number of Terror Attacks	.15	2.82**	.08	1.67	.02	
Direct Exposure	.14	2.64**	.10	2.12*	.02	
III. Post-event Variables						.38
Intrusive Rumination	.50	9.56***	.51	9.76***	.19	
IV. World Assumptions						.39
Justice/Controllability	.11	2.22*	.11	2.22*	.01	

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

3.3.1.1.2 Hyperarousal

According to the results of the hierarchical multiple regression analysis conducted to examine predictors of hyperarousal, with all variables in the equation, in the last step, 40% (adjusted $R^2 = .37$) of variability in hyperarousal was explained by some of the variables in the equation (F (12, 292) = 16.10, $p < .001$). The pre-event variables, labeled as control variables, explained 9% of the variance in hyperarousal in the first step (F (6, 295) = 2.59, $p < .05$). Among those variables, female gender ($\beta = -.16$; $t =$

-2.80, p <.01) and having previous trauma experience (β = .14; t = 2.41, p <.05) were the only associates of hyperarousal.

Among event-related variables, level of total media exposure positively predicted hyperarousal (β = .17; t = 2.98, p < .01) and its inclusion to the equation improved the explained variance to 12% (R^2 *change* = .03, *F change* (1,296) = 8.90, p < .01). Moreover, time passed since the attack was found to be positively associated with hyperarousal (β = .11; t = 1.99, p < .05) and its entrance to the equation incremented the explained variance to 13% (R^2 *change* = .01, *F change* (1,295) = 3.96, p < .05). Lastly, number of terror attacks selected as being affected was also found to predict hyperarousal (β = .11; t = 2.04, p < .05) and its entrance incremented the explained variance to 14% (R^2 *change* = .01, *F change* (1,294) = 4.17, p < .05).

The entrance of post-event variables to the equation increased the explained variance to 37% (R^2 *change* = .23, *F change* (1,293) = 107.37, p < .001). Among them, only intrusive rumination significantly predicted hyperarousal (β = .55; t = 10.36, p < .001). From world assumptions, benevolence of the world assumption positively predicted hyperarousal (β = -.18; t = -3.67, p < .001) and its inclusion to the equation improved the explained variance to 40% (R^2 *change* = .03, *F change* (1,292) = 13.43, p < .001).

When all the variables were in the equation in the last step, age (β = .11; t = 2.04, p < .05), education level (β = -.11; t = 2.04, p < .05), intrusive rumination (β = .53; t = 10.15, p < .001), and benevolence of the world assumption (β = -.18; t = -3.67, p < .001) remained as the significant predictors of hyperarousal. Table 3.10 summarizes the findings of the hierarchical multiple regression analysis for hyperarousal subscale.

Table 3.10

Findings of the hierarchical multiple regression analysis for hyperarousal

Block	β (within set)	*t* (within set)	β (last step)	*t* (last step)	R^2 change	Model R^2
Dependent Variable: Hyperarousal						
I. Pre-event variables					.09	.09
Age	.01	.13	.11	2.04*		
Female Gender	-.16	-2.80**	.00	.04		
Education Level	-.13	-1.88	-.11	-2.04*		
Having Prev. Trauma	.14	2.42*	.00	-.01		
II. Event-related variables						.14
Total Media Exposure	.17	2.98**	.05	1.05	.03	
Time since attack	.11	1.99*	.04	.78	.01	
Num. of terror Attacks	.11	2.04*	.04	.75	.01	
III. Post-event Variables						.37
Intrusive Rumination	.55	10.36***	.53	10.15***	.23	
IV. World Assumptions						.40
Benevolence	-.18	-3.66***	-.18	-3.66***	.03	

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

3.3.1.1.3 Avoidance

According to the results of the hierarchical multiple regression analysis performed to reveal predictors of avoidance subscale, with all variables in the equation, in the last step, 23% (adjusted $R^2 = .21$) of variability in avoidance scores was explained by some of the variables in the equation (F (11, 293) = 8.15, $p < .001$). The pre-event variables contributed 5% to explained variance in the first step (F (7, 297) = 2.17, $p < .05$). Among them, only female gender was found to be the significant associate of avoidance (β = -.18; t = -3.00, $p < .01$).

The entrance of event-related variables into the equation increased the explained variance to seven percent (R^2 *change* = .02, *F change* (1,296) = 5.46, $p < .05$). Level of total media exposure was the only event-related predictor of avoidance scores (β = .13; t = 2.34, $p < .05$).

From coping and rumination variables, intrusive rumination significantly predicted avoidance (β = .43; t = 7.37, $p < .001$) and its entrance to the equation increased the explained variance to 21% (R^2 *change* = .15, *F change* (1,295) = 54.31, $p < .001$). Moreover, fatalistic coping was found to predict avoidance (β = .11; t = 2.04, $p < .05$)

and with its addition, the explained variance reached 22% (R^2 *change* = .01, *F change* (1,294) = 4.15, $p < .05$).

With the inclusion of world assumptions in the fourth and the last step, the explained variance improved to 23% (R^2 *change* = .01, *F change* (1,293) = 4.64, $p < .05$). Among the world assumptions, only the assumption of self-control positively predicted avoidance ($\beta = .11$; $t = 2.15$, $p < .05$).

When all the variables were in the equation in the last step, only intrusive rumination ($\beta = .42$; $t = 7.28$, $p < .001$) and assumption of self-control ($\beta = .11$; $t = 2.15$, $p < .05$) remained as the significant predictors of avoidance. Table 3.11 summarizes the findings of the hierarchical multiple regression analysis for avoidance subscale.

Table 3.11

Findings of the hierarchical multiple regression analysis for avoidance

Block	β (within set)	*t* (within set)	β (last step)	*t* (last step)	R^2 change	Model R^2
Dependent Variable: Avoidance						
I. Pre-event variables					.05	.05
Female Gender	-.18	-3.00**	-.03	-.58		
II. Event-related variables						.07
Total Media Exposure	.13	2.34*	-.06	1.15	.02	
III. Post-event Variables						.22
Intrusive Rumination	.43	7.37***	.42	7.28***	.15	
Fatalistic Coping	.11	2.04*	.10	1.87	.01	
IV. World Assumptions						.23
Self-control	.11	2.15*	.11	2.15*	.01	

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

3.3.2 Predictors of PTG

A hierarchical multiple regression analysis was performed in order to reveal significant predictors of posttraumatic growth (PTG). As demonstrated in Table 3.12, the variables were entered into the equation in five steps. The sociodemographic variables (i.e., age, gender, education level, and employment status), presence of previous trauma, status of current psychiatric diagnosis and current psychological help were labeled as control variables and entered into the equation in the first step. In the second step, event-related factors (i.e., number of terror attacks, time elapsed since attack, type

of exposure and level of total media exposure) were added to the equation via stepwise method. Following the second step, coping variables (i.e., fatalistic, helplessness, problem-solving, seeking social support/optimistic) and rumination variables (i.e., deliberate and intrusive) were entered into the equation via stepwise method. In the fourth step, dimensions of world assumptions (i.e., benevolence of the world, justice/controllability, randomness, luck, self-worth, and self-control) were included in the equation. Finally, in the last step, PTS variables (i.e., intrusion, hyperarousal, and avoidance) were added to the regression.

Table 3.12

Steps of the hierarchical multiple regression analyses for PTG and its subscales

Variables	Method
I. Pre-event Variables (Control Variables)	Enter
Age	
Gender (0: Female; 1: Male)	
Education Level	
Employment (0: Employed; 1: Not employed)	
Current Psychological Help (0: No, 1: Yes)	
Current Psychiatric Diagnosis (0: No, 1: Yes)	
Previous Trauma (0: No, 1: Yes)	
II. Event-related Variables	Stepwise
Time elapsed since attack	
Number of terror attacks	
Type of Exposure	
Level of Total Media Exposure	
III. Post-event Variables	Stepwise
Ways of Coping	
Problem-Solving	
Seeking Social Support/Optimistic	
Fatalistic	
Helplessness	
Event-Related Rumination	
Intrusive	
Deliberate	
IV. World Assumptions	Stepwise
Benevolence of the world	
Justice/Controllability	
Randomness	
Luck	
Self-worth	
Self-control	
V. PTS	Stepwise
Intrusion	
Hyperarousal	
Avoidance	

The results of the analysis showed that when all variables were entered in the last step, 36% (adjusted R^2 = .32) of variability in overall PTG score was explained by some of the variables in the equation (F (14, 290) = 11.41, p < .001). The pre-event variables, labeled as control variables, contributed 5% to explained variance in the first step (F (7, 297) = 2.21, p < .05). Among these variables, only having previous trauma experience was significantly associated with PTG (β = .12; t = 2.16, p < .05).

Among event-related factors, being directly or indirectly exposed to the attack (no exposure except for media: 0, direct or indirect exposure: 1) significantly predicted PTG score (β = .14; t = 2.46, p < .05) and its entrance to the equation increased the explained variance to 7% (R^2 *change* = .02, *F change* (1,296) = 6.06, p < .05). Moreover, level of media exposure to the details of attack was found to be significantly associated with PTG (β = .12; t = 2.05, p < .05) and its inclusion to the equation improved the explained variance to 8% (R^2 *change* = .01, *F change* (1,295) = 4.21, p < .05).

From post-event factors, deliberate rumination positively predicted PTG (β = .38; t = 6.62, p < .001) and its inclusion to the equation improved the explained variance to 20% (R^2 *change* = .12, *F change* (1,294) = 43.80, p < .001). Furthermore, fatalistic coping positively predicted PTG (β = .27; t = 5.37, p < .001) and with its entrance, the explained variance increased to 27% (R^2 *change* = .07, *F change* (1,293) = 28.85, p < .001). The last of these variables, social support seeking/optimistic coping, predicted PTG (β = .25; t = 4.70, p < .001) and its inclusion to the equation improved the explained variance to 32% (R^2 *change* = .05, *F change* (1,292) = 22.11, p < .001).

The inclusion of world assumptions into the equation increased the explained variance to 34% (R^2 *change* = .02, *F change* (1,291) = 8.95, p < .01). Among them, only assumption of justice/controllability was the significant associate of total PTG score (β = .16; t = 2.99, p < .01). When the PTS variables were added in the final step, the explained variance of PTG scores reached 36% (R^2 *change* = .01, *F change* (1,290) = 5.16, p < .05). From these variables, only intrusion was significantly associated with PTG (β = .12; t = 2.72, p < .05).

When all the variables were in the equation in the last step, having previous trauma experience (β = .10; t = 2.12, p < .05), deliberate rumination (β = .29; t = 5.26, p <

.001), fatalistic coping (β = .21; t = 4.26, p < .001), social support seeking/optimistic coping (β = .20; t = 3.84, p < .001), assumption of justice/controllability (β = .15; t = 2.88, p < .01), and intrusion (β = .12; t = 2.72, p < .05) remained as significant predictors of PTG. Table 3.13 summarizes the findings of the hierarchical multiple regression analysis for PTG.

Table 3.13

Findings of the hierarchical multiple regression analysis for PTG

Block	β (within set)	t (within set)	β (last step)	t (last step)	R^2 change	Model R^2
Dependent Variable: PTG						
I. Pre-event variables					.05	.05
Previous Trauma	.12	2.16*	.10	2.11*		
II. Event-related variables						.08
Exposure to the attack	.14	2.46*	.01	.28	.02	
Total Media Exposure	.12	2.05*	.04	.75	.01	
III. Post-event Variables						.32
Deliberate Rumination	.38	6.62***	.29	5.26***	.12	
Fatalistic Coping	.27	5.37***	.21	4.26***	.07	
Seeking support/optimistic	.25	4.70***	.20	3.84***	.05	
IV. World Assumptions						.34
Justice/Controllability	.16	2.99**	.15	2.88**	.02	
V. PTS						.36
Intrusion	.12	2.72*	.12	2.72*	.01	

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

3.3.2.1 Predictors of PTG subscales

In order to examine the significant predictors of PTG subscales, hierarchical multiple regression analyses for each PTG subscale (i.e., new possibilities, spiritual change, relating to others, personal strength, appreciation of life) was performed by using the same steps as previously presented in Table 3.12.

3.3.2.1.1 New possibilities

According to the results of the analysis, with all the variables in the equation, in the last step, 30% (adjusted R^2 = .27) of variability in new possibilities dimension of PTG was explained by some of the variables in the equation (F (13, 291) = 9.65, p < .001). None of the pre-event variables, labeled as control variables, contributed to explained

variance in the first step. That is, control variables did not predict any significant change in new possibilities score.

From event-related variables, being directly or indirectly exposed to the attack (no exposure except for media: 0, direct or indirect exposure: 1) significantly predicted new possibilities score (β = .12; t = 2.10, p < .05) and its inclusion to the regression equation increased the explained variance to 5% (R^2 *change* = .01, *F change* (1,296) = 4.42, p < .05).

Among post-event variables, deliberate rumination positively predicted new possibilities (β = .39; t = 6.88, p < .001) and its inclusion to the equation improved the explained variance to 19% (R^2 *change* = .13, *F change* (1,295) = 47.38, p < .001). Additionally, social support seeking/optimistic coping positively predicted new possibilities (β = .25; t = 4.54, p < .001) and its inclusion to the equation improved the explained variance to 24% (R^2 *change* = .05, *F change* (1,294) = 20.58, p < .001). Lastly, fatalistic coping positively predicted new possibilities (β = .14; t = 2.71, p < .01) and with its entrance to the equation, the explained variance increased to 26% (R^2 *change* = .02, *F change* (1,293) = 7.34, p < .01).

The inclusion of world assumptions to the regression increased the explained variance to 28% (R^2 *change* = .02, *F change* (1,292) = 8.66, p < .01). From the dimensions of world assumptions, only the assumption of justice/controllability was significantly associated with new possibilities (β = .16; t = 2.94, p < .01). As for the PTS variables added in the final step, only avoidance was significantly associated with new possibilities (β = .16; t = 3.08, p < .01) and with its inclusion, the explained variance reached 30% (R^2 *change* = .02, *F change* (1,291) = 9.51, p < .01).

With all the variables in the equation, in the final step, deliberate rumination (β = .30; t = 5.50, p < .001), seeking social support/optimistic coping (β = .18; t = 3.31, p < .001), assumption of justice (β = .16; t = 2.99, p < .01), and avoidance (β = .16; t = 3.08, p < .01) remained as the significant predictors of new possibilities dimension of PTG. Table 3.14 summarizes the findings of the analysis for new possibilities.

Table 3.14

Findings of the hierarchical regression analysis for new possibilities

Block	β (within set)	t (within set)	β (last step)	t (last step)	R^2 change	Model R^2
Dependent Variable: New Possibilities						
II. Event-related variables						.01
Exposure to the attack	.12	2.10*	.07	.95	.01	
III. Post-event Variables						.26
Deliberate Rumination	.39	6.88***	.30	5.50***	.13	
Seeking support/optimistic	.25	4.54***	.18	3.31*	.05	
Fatalistic Coping	.14	2.71**	.10	1.92	.02	
IV. World Assumptions						.28
Justice/Controllability	.16	2.94**	.16	2.99**	.02	
V. PTS						.30
Avoidance	.16	3.08**	.16	3.08**	.02	

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

3.3.2.1.2 Spiritual change

According to the results of the analysis, with all variables in the equation, in the final step, 35% (adjusted $R^2 = .32$) of variability in spiritual change scores was explained by some of the variables in the equation (F (11, 293) = 14.22, $p < .001$). The pre-event factors, labeled as control variables, explained 10% of the variance in spiritual change in the first step (F (7, 297) = 4.51, $p < .001$). Among them, female gender (β = -.17; t = -3.00, $p < .01$), education level (β = -.19; t = -2.83, $p < .01$), and not getting current psychological help (β = -.16; t = -2.49, $p < .05$) were found to be significantly associated with spiritual change.

The entrance of trauma-related factors into the equation did not improve the explained variance in spiritual change. In other words, none of trauma-related variables predicted significant change in spiritual change scores.

From post-event variables, fatalistic coping positively predicted spiritual change (β = .40; t = 7.75, $p < .001$) and with its entrance to the equation, the explained variance increased to 25% (R^2 *change* = .15, *F change* (1,296) = 60.04, $p < .001$). Furthermore, deliberate rumination positively predicted spiritual change (β = .27; t = 5.40, $p < .001$) and its inclusion to the equation improved the explained variance to 32% (R^2 *change* = .07, *F change* (1,295) = 29.16, $p < .001$). Lastly, seeking social support/optimistic

coping positively predicted spiritual change (β = .14; t = 2.79, p < .01) and its inclusion to the equation improved the explained variance to 33% (R^2 *change* = .02, *F change* (1,294) = 7.78, p < .01).

Among the world assumptions, only the assumption of randomness predicted spiritual change (β = -.13; t = -2.53, p < .05) and its inclusion to the equation improved the explained variance to 35% (R^2 *change* = .02, *F change* (1,293) = 6.40, p < .05). None of the PTS variables that were added in the fifth stage was significantly associated with the spiritual change.

With all the variables in the equation, in the final step, education level (β = -.15; t = -2.53, p < .05), not getting current psychological help (β = -.13; t = -2.32, p < .05), fatalistic coping (β = .36; t = 7.48, p < .001), deliberate rumination (β = .26; t = 5.13, p < .001), seeking social support/optimistic coping (β = .14; t = 2.73, p < .01), and assumption of randomness (β = -.13; t = -2.53, p < .05) remained as the significant predictors of spiritual change. Table 3.15 summarizes the findings of the hierarchical multiple regression analysis for spiritual change.

Table 3.15

Findings of the hierarchical multiple regression analysis for spiritual change

Block	β (within set)	t (within set)	β (last step)	t (last step)	R^2 change	Model R^2
Dependent Variable: Spiritual Change						
I. Pre-event variables					.10	.10
Female Gender	-.17	-3.00**	-.08	-1.66		
Education Level	-.19	-2.83**	-.15	-2.53*		
Current Psy. Help (0:No, 1: Yes)	-.16	-2.49*	-.13	-2.32*		
III. Post-event Variables						.33
Fatalistic Coping	.40	7.75***	.36	7.48***	.15	
Deliberate Rumination	.27	5.40***	.26	5.13***	.07	
Seeking support/optimistic	.14	2.79**	.14	2.73**	.02	
IV. World Assumptions						.35
Randomness	-.13	-2.53*	-.13	-2.53*	.01	

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

3.3.2.1.3 Relating to others

According to the results, with all variables in the equation, in the last step, 23% (adjusted R^2 = .19) of variability in relating to others dimension of PTG was explained by some of the variables in the equation (F (14, 290) = 6.03, p < .001). None of the pre-event variables contributed to the explained variance in the first step. In other words, control variables did not predict any significant change in relating to others.

From the event-related variables, being directly or indirectly exposed to the attack (0: no exposure except for media, 1: direct or indirect exposure) predicted relating to others score (β = .14; t = 2.41, p < .05) and its inclusion to the regression equation increased the explained variance to 5% (R^2 *change* = .02, *F change* (1,296) = 5.78, p < .05). Moreover, level of media exposure was significantly associated with relating to others score (β = .13; t = 2.17, p < .05) and its entrance to the equation increased the explained variance to 6% (R^2 *change* = .02, *F change* (1,295) = 4.72, p < .05).

As for the post-event variables, deliberate rumination positively predicted relating to others (β = .32; t = 5.30, p < .001) and its inclusion to the equation improved the explained variance to 14% (R^2 *change* = .08, *F change* (1,294) = 28.12, p < .001). Seeking social support/optimistic coping was also associated with the score of relating to others (β = .21; t = 3.68, p < .001) and with its inclusion to the equation, the explained variance reached to 18% (R^2 *change* = .04, *F change* (1, 293) = 13.56, p < .001). Lastly, helplessness coping predicted relating to others score (β = .16; t = 2.56, p < .05) and with its entrance, the explained variance increased to 20% (R^2 *change* = .02, *F change* (1, 292) = 6.57, p < .05).

Among the world assumptions, assumption of justice/controllability was associated with relating to others (β = .13; t = 2.35, p < .05), and with its inclusion to the regression, the explained variance incremented to 21% (R^2 *change* = .02, *F change* (1,291) = 5.53, p < .05). Also, assumption of self-worth predicted relating to others score (β = .13; t = 2.05, p < .05) and its entrance to the equation improved the explained variance to 23% (R^2 *change* = .01, *F change* (1,290) = 4.20, p < .05). As for the PTS variables, none of them was significantly associated with relating to others score.

With all the variables in the equation, in the final step, deliberate rumination (β = .25; t = 4.40, p < .001), seeking social support/optimistic coping (β = .23; t = 3.60, p < .001), helplessness coping (β = .22; t = 3.30, p < .001), assumption of justice/controllability (β = .13; t = 2.38, p < .05), and assumption of self-worth (β = .13; t = 2.05, p < .05) remained as the significant predictors of relating to others dimension of PTG (See Table 3.16 for the summary of results for relating to others).

Table 3.16

Findings of the hierarchical regression analysis for relating to others

Block	β (within set)	t (within set)	β (last step)	t (last step)	R^2 change	Model R^2
Dependent Variable: Relating to Others						
II. Event-related variables						.06
Exposure to the attack	.14	2.41*	.02	.33	.02	
Total Media Exposure	.13	2.17*	.07	1.17	.02	
III. Post-event Variables						.20
Deliberate Rumination	.32	5.30***	.25	4.34***	.08	
Seeking support/optimistic	.21	3.68***	.23	3.60***	.04	
Helplessness Coping	.16	2.56*	.22	3.29***	.02	
IV. World Assumptions						.23
Justice/Controllability	.13	2.35*	.13	2.38*	.02	
Self-worth	.13	2.05*	.13	2.05*	.01	

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

3.3.2.1.4 Personal strength

The results of the analysis showed that when all the variables were in the equation, in the final step, 31% (adjusted R^2 = .28) of variability in personal strength dimension of PTG was explained by some of the variables in the equation (F (14, 287) = 9.39, p < .001). None of the pre-event variables contributed significantly to the explained variance in the first step. In other words, control variables did not predict any significant change in personal strength scores.

Among the trauma-related factors, media exposure to the details of attack positively predicted personal strength (β = .15; t = 2.51, p < .05) and its inclusion to the equation improved the explained variance to 6% (R^2 *change* = .02, *F change* (1,296) = 6.28, p < .05). Moreover, amount of time that elapsed since the attack was negatively associated with personal strength score (β = -.13; t = -2.26, p < .05) and its entrance to

the equation increased the explained variance to 8% (R^2 *change* = .02, *F change* (1,295) = 5.10, $p < .05$). Lastly, being exposed to the attack (no exposure except for media or indirect exposure: 0, direct exposure: 1) predicted personal strength ($\beta = .12$; $t = 2.02$, $p < .05$) and with its inclusion, the explained variance incremented to 9% (R^2 *change* = .01, *F change* (1,294) = 4.08, $p < .05$).

From coping and rumination variables, seeking social support/optimistic coping positively predicted personal strength ($\beta = .33$; $t = 5.88$, $p < .001$) and its inclusion to the equation improved the explained variance to 18% (R^2 *change* = .10, *F change* (1,293) = 34.52, $p < .001$). Moreover, deliberate rumination positively predicted personal strength ($\beta = .27$; $t = 4.77$, $p < .001$) and with its entrance to the equation, the explained variance increased to 24% (R^2 *change* = .06, *F change* (1,292) = 22.79, $p < .001$). Finally, fatalistic coping was found to be associated with personal strength ($\beta = .22$; $t = 4.07$, $p < .001$) and its inclusion to the equation improved the explained variance to 28% (R^2 *change* = .04, *F change* (1,291) = 16.54, $p < .001$).

When world assumptions were added to the equation, the explained variance reached 30% (R^2 *change* = .02, *F change* (1,290) = 8.64, $p < .01$). Among the assumptions, only the assumption of justice/controllability predicted personal strength ($\beta = .16$; $t = 2.94$, $p < .01$). The entrance of PTS variables to the regression did not contributed to the explained variance in personal strength. That is, none of the PTS variables was found to be associated with personal strength.

With all the variables in the equation, in the final step, age ($\beta = .11$; $t = 2.04$, $p < .05$), having previous trauma experience ($\beta = .11$; $t = 2.26$, $p < .05$), time elapsed since the attack ($\beta = -.11$; $t = -2.07$, $p < .05$), seeking social support/optimistic coping ($\beta = .22$; $t = 3.92$, $p < .001$), deliberate rumination ($\beta = .26$; $t = 4.80$, $p < .001$), fatalistic coping ($\beta = .19$; $t = 3.53$, $p < .001$), and the assumption of justice/controllability ($\beta = .16$; $t = 2.94$, $p < .01$) remained as the significant predictors of personal strength. Table 3.17 summarizes the findings of the hierarchical multiple regression analysis for personal strength dimension of PTG.

Table 3.17

Findings of the hierarchical multiple regression analysis for personal strength

Block	β (within set)	*t* (within set)	β (last step)	*t* (last step)	R^2 change	Model R^2
Dependent Variable: Personal Strength						
I. Pre-event variables						
Age	.16	2.62**	.11	2.04*		
Previous Trauma	.11	1.87	.11	2.26*		
II. Event-related variables						.09
Total Media Exposure	.15	2.51*	.09	1.80	.02	
Time since the attack	-.13	-2.26*	-.11	-2.07*	.02	
Exposure to the attack	.12	2.02*	.01	.10	.01	
III. Post-event Variables						.28
Seeking support/optimistic	.33	5.88***	.22	3.92***	.10	
Deliberate Rumination	.27	4.77***	.26	4.80***	.06	
Fatalistic Coping	.22	4.07***	.19	3.53***	.04	
IV. World Assumptions						.30
Justice/Controllability	.16	2.94**	.16	2.94**	.02	

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

3.3.2.1.5 Appreciation of life

The results of the analysis showed that when all variables were in the equation, in the final step, 27% (adjusted $R^2 = .24$) of variability in appreciation of life dimension of PTG was explained by some of the variables in the equation (F (13, 291) = 8.32, $p < .001$). The pre-event factors, labeled as control variables, explained six percent of the variance in appreciation of life in the first step (F (7, 297) = 2.50, $p < .05$). Among them, only the presence of previous traumatic experience was found to be significantly associated with appreciation of life ($\beta = .15$; $t = 2.72$, $p < .01$). The inclusion of event-related variables into the equation did not improve the explained variance in appreciation of life. In other words, event-related variables did not predict any significant change in appreciation of life scores.

From post-event variables, deliberate rumination positively predicted appreciation of life ($\beta = .29$; $t = 5.07$, $p < .001$) and its inclusion to the equation improved the explained variance to 13% (R^2 *change* = .08, *F change* (1,296) = 25.68, $p < .001$). Moreover, problem-solving coping positively predicted appreciation of life ($\beta = .24$; $t = 4.37$, $p < .001$) and its inclusion to the equation improved the explained variance to 18% (R^2 *change* = .05, *F change* (1,295) = 19.07, $p < .001$). Finally, fatalistic coping positively

predicted appreciation of life (β = .18; t = 3.31, p < .001) and with its entrance to the equation, the explained variance increased to 21% (R^2 *change* = .03, *F change* (1,294) = 10.97, p < .001).

From the world assumptions, assumption of self-worth predicted significant increase in appreciation of life scores (β = .14; t = 2.31, p < .05) and its entrance to the equation increased the explained variance to 23% (R^2 *change* = .02, *F change* (1,293) = 5.32, p < .05). Also, the assumption of self-control predicted appreciation of life score (β = .12; t = 2.31, p < .05), and with its inclusion, the explained variance reached 24% (R^2 *change* = .01, *F change* (1,292) = 5.14, p < .05). With the inclusion of PTS variables in the last step, the total explained variance improved to 27% (R^2 *change* = .03, *F change* (1,291) = 12.13, p < .001). Among them, only avoidance significantly predicted appreciation of life score (β = .19; t = 3.48, p < .001).

With all the variables in the equation, in the final step, age (β = -.13; t = -2.26, p < .05), having previous traumatic experience (β = .13; t = 2.58, p < .01), deliberate rumination (β = .18; t = 3.19, p < .01), problem-solving coping (β = .18; t = 3.13, p < .01), fatalistic coping (β = .17; t = 3.23, p < .001), assumption of self-worth (β = .18; t = 2.96, p < .01), and avoidance (β = .19; t = 3.48, p < .001) remained as the significant predictors of appreciation of life. Table 3.18 summarizes the findings for appreciation of life.

Table 3.18
Findings of the hierarchical multiple regression analysis for appreciation of life

Block	β (within set)	t (within set)	β (last step)	t (last step)	R^2 change	Model R^2
Dependent Variable: Appreciation of Life						
I. Pre-event variables					.06	.06
Age	-.05	-.83	-.13	-2.26*		
Having Previous Trauma	.15	2.72**	.13	2.58**		
III. Post-event Variables						.21
Deliberate Rumination	.29	5.07***	.18	3.19**	.08	
Problem-solving Coping	.24	4.37***	.18	3.13**	.05	
Fatalistic Coping	.18	3.31***	.17	3.23***	.03	
IV. World Assumptions						.24
Self-worth	.14	2.31*	.18	2.96**	.01	
Self-control	.12	2.27*	.10	1.82	.01	
V. PTS						.27
Avoidance	.19	3.48***	.19	3.48***	.03	

$^{***}p$ < .001, $^{**}p$ < .01, $^{*}p$ < .05

3.3.3 Summary of the Predictors of PTS and PTG

The summary of significant and non-significant predictors of PTS, PTG and all of their domains was provided in Table 3.19.

Table 3.19

Summary of all hierarchical multiple regression analyses for PTS, PTG and all of their domains (continues in the next page)

Variables	PTS Total	Intrusion	Hyper-arousal	Avoidance	PTG Total	New Possb.	Spiritual Change	Rel. to Others	Personal strength	App. Of Life
I. Pre-event Factors										
Age	+	+	+						+	+
Gender (0:female, 1:male)	-*	-*	-*	-*			-*			
Education Level	-	-	-				-			
Employment										
Current Psy. Help (0:no, 1:yes)							-			
Current Psy. Diagn. (0:no, 1:yes)										
Prev. Traumatic Exp. (0:no, 1:yes)	+*	+*	+*		+				+	+
II. Event-related Factors										
Time elapsed since attack			+*						-	
Num. of selected attacks		+*	+*							
Direct Exp. vs other types of exp.		+								
Indirect or Direct Exp. vs no exp.					+*	+*		+*	+*	
Total Media Exposure	+	+	+*	+*	+*			+*	+*	
III. Post-event Factors										
Problem-Solving Coping										+
SeekingSoc.Support/Optimistic					+	+	+	+	+	
Fatalistic Coping				+*	+	+	+		+	+
Helplessness Coping								+		
Intrusive rumination	+	+	+	+						
Deliberate rumination					+	+	+	+	+	+

+/- indicates the direction of the relationship

*indicates that the variable significant within set but not in the last step

Table 3.19 *(cont'd)*

Variables	PTS Total	Intrusion	Hyper-arousal	Avoidance	PTG Total	New Possb.	Spiritual Change	Rel. to Others	Personal strength	App. Of Life
IV. World Assumptions										
Benevolence of the world	-		-							
Justice/Controllability	+	+			+	+		+	+	
Randomness							-			
Luck										
Self-worth								+		+
Self-control				+						+*
V. Posttraumatic Stress										
Intrusion					+					
Hyperarousal										
Avoidance						+				+

+/- indicates the direction of the relationship

*indicates that the variable significant within set but not in the last step

CHAPTER 4

DISCUSSION

The current study basically aimed to investigate the factors contributing to explaining the level of PTS and PTG in the aftermath of exposure to terror attacks. This section will start with a discussion of the findings about terror-related experiences of the participants. Then, the main results of the study regarding the factors associated with PTS, PTG, and all of their domains will be discussed. Also, strengths and clinical implications of the study will be presented. Lastly, a discussion of the limitations and the suggestions for future research will be provided.

4.1 Exposure to Terror Attacks

The current study provided information regarding terror-related experiences of the present sample in the period from June, 2015 to March, 2017 in Turkey. According to the results, the majority of the participants (N = 256, 83.9%) reported that they were affected by four or more terror attacks out of thirty-three listed attacks that occurred during the given period. In the context of ongoing terrorism, experiencing higher number of terror events can be related with different courses of adaptation: greater vulnerability to be traumatized or habituation and greater resilience. The possible impact of the continuous attacks may depend on the nature of the attacks as suggested by Palmieri, Canetti-Nisim, Galea, Johnson, and Hobfoll (2008). They stated that, in the context of recurrent violence, people tend to be affected more when the risk of becoming the victim of an attack is high. Consistent with this view point, the present study indicated that several of the deadliest attacks were selected by participants as the most distressing. The highest number of participants chose Ankara Güvenpark Bus Station Attack (N = 90, 29.5%), 15 July Coup Attempt (N = 84, 27.5%), and Ankara Train Station Attack (N = 67, 22%) as the most distressing attack. Since these attacks

occurred in highly crowded cities with thousands of causalities, it is possible that there was higher possibility of being directly or indirectly exposed to these attacks. Also, the media coverage and public interest were very intensive regarding these attacks and the victims of these attacks, increasing the possibility of media exposure. Also, people might have more easily identified themselves or their close ones with the victims and thus realized that it could have been themselves or their close ones who were there at the time of the attack or that there is the possibility of being there in case of future attacks. In addition to recognizing their vulnerability, it is also possible that people faced with the unpredictability and randomness of the terror attacks as they realized that they can take place anywhere like a crowded bus station as it was the case in Güvenpark Bus Station Attack.

The present study also examined the possible ways and types of exposure to the attack that participants selected as the most distressing to them. The results revealed high rates of indirect exposure (N = 193, 63.3%) and relatively lower rates of direct exposure (N = 72, 23.6%) and no exposure except for media (N = 40, 13.1%). The highest frequency of exposure was reported to the indirect exposure items (i.e., expecting danger for family/friend during the attack, being around the place of the attack but not witnessed, having a family/friend witnessing the attack without injury, or being exposed to the details of the attack due to work). The most frequently selected item was expected danger for a family member or friend during the attack (N = 235, 77%) while the least frequently selected one was work-related exposure to the details of the attack (N = 54, 17.7%). Relatively lower rates of exposure were reported to the items of direct exposure (i.e., having family/friend injured in the attack, having family/friend died in the attack, directly witnessing the attack, being injured in the attack). In terms of direct exposure items, the most commonly selected item was injury of family/friend in the attack (N = 41, 13.4%) whereas the most rarely selected one was being injured in the attack (N = 3, 1%). Also, high frequency of media exposure about the details of the attack, especially via social media, the Internet and TV, was reported by the participants. Previous studies done in the context of ongoing terrorism in Israel also revealed high rates of indirect exposure and relatively lower rates of direct exposure (Bleich et al., 2003; 2006). Considering the fact that terrorism affects,

in fact targets, the wider community beyond the immediate sufferers, high levels of indirect exposure and media exposure were as expected.

4.2 Factors Contributing to PTS and PTG following Terror Attacks

In the current study, a set of hierarchical multiple regression analyses was performed to examine the factors associated with levels of PTS, PTG and all of their domains. This part will focus on the discussion of the results of these analyses.

4.2.1 Predictors of PTS and Its Three Domains

Four-step hierarchical multiple regression analyses via stepwise method were conducted separately with PTS and its three symptom clusters (intrusion, hyperarousal and avoidance) as the criterion variables. In each of the analyses, pre-event factors consisting of sociodemographic variables (i.e., gender, age, education level, and employment status) and mental health-related variables (i.e., previous traumatic experiences, status of current psychiatric diagnosis and current psychological help), terror exposure-related factors (i.e., number of selected terror attacks, time elapsed since the most distressing attack, type of exposure to the attack and level of total media exposure related to the attack), post-event factors consisting of coping variables (i.e., fatalistic, helplessness, problem-solving, seeking social support/optimistic) and rumination variables (i.e., deliberate and intrusive), and lastly, world assumptions (i.e., benevolence of the world, justice/controllability, randomness, luck, self-worth, and self-control) were examined as possible predictor variables.

Results revealed that age, female gender, previous traumatic experience, level of total media exposure to the most distressing terror attack, intrusive rumination related to the attack, and assumption of justice/controllability were positive associates while education level and assumption of benevolence of the world were negative associates of PTS levels. However, female gender and previous trauma were no longer associated with PTS when intrusive rumination was included in the regression.

In terms of sociodemographic characteristics, partially supporting the Hypothesis 1, results of the current study showed that older age and lower education level predicted higher levels of PTS. This results are consistent with some of the previous findings

that showed that being middle-aged or older as compared to being younger was a risk factor for the adverse outcomes in the aftermath of disasters and terror incidents (Norris et al., 2002) and for the development of terror-related PTS symptoms (e.g., DiGrande et al., 2008; Hall et al., 2008). Having a lower level education have also been found to be predictive of PTS symptoms in previous studies of various traumas (Brewin et al., 2000) and terrorism (Bleich et al., 2006; Njenga et al., 2004). A possible explanation for the increase of terror-related PTS level with age comes from the studies of terror threat perception which indicated that middle-aged or older adults reported greater level of perceived risk/threat of terrorism as compared to younger ones (Goodwin, Willson & Gaines, 2005; Stevens et al., 2011). As the theories of PTS and PTSD have noted, the level of perceived threat determines the coping strategies and the level of posttraumatic stress (Keane & Barlow, 2002; Ehlers & Clark, 2000; Freedy et al., 1993). It was also suggested that caregiving burden and social support imbalance can explain the increased level of PTS in middle-aged individuals (Norris et al., 2002). Most of the explanations regarding the negative association between education level and PTS point out possible resource deprivation and/or lower cognitive abilities in people with lower education. In the present study, being female and having a previous traumatic experience were associated with higher levels of PTS symptoms, however; both lost their significance to predict PTS when intrusive rumination was included in the regression. In other words, women and/or individuals with a previous traumatic experience may have engaged in more intrusive rumination which had more contribution to explaining the variance in the heightened levels of PTS. In the literature, being women and having a history of prior trauma were consistently found as risk factors for the development and severity of PTS symptoms and PTSD in the aftermath of various traumatic events including terrorism (Bleich et al., 2003; DiMaggio & Galea, 2006; Eşsizoğlu et al., 2017; Karanci et al., 1999; Ozer et al., 2008; Page et al., 2009; Tolin & Foa, 2006). These findings were interpreted based on the differences in the sense of threat, perception of self-efficacy, level of resources, additional life stress, etc. It is possible that these factors and many others determine the processing of the event (i.e., intrusive rumination), which results in posttraumatic stress reactions. Still, the role of intrusive ruminations on the relationship of female gender and prior trauma with the level of PTS is needed to be studied further.

Regarding the event-related variables of the present study, the level of media exposure to the most distressing terror attack was the only significant predictor of overall PTS level. According to the results, as it was hypothesized (Hypothesis 2), higher frequency of total media exposure predicted greater levels of PTS. This finding is in agreement with previous studies which provided evidence for a positive association between media exposure to terrorism and PTS (DiMaggio & Galea, 2006; Pfefferbaum et al., 2014). Although exposure through media is not qualified as a traumatic exposure in DSM-5 unless it is work-related, many studies revealed an association between event-related media consumption and negative psychological outcomes of human-induced and natural disasters. It can be suggested that people who are already exposed directly or indirectly to the events may be drawn more to media consumption about the details. However, many studies still reported a significant association after controlling for other types of exposure (Pfefferbaum et al., 2014). In the context of terrorism, media coverage helps spreading the frightening terrorist message and provides powerful intrusive images and verbal information, thereby facing the individuals with a life-threat for the self and the others. Being repeatedly exposed to the details of the terrorist attacks through the media, the individuals may perceive more threat and fear but less control, which in turn can provoke posttraumatic stress responses. It was suggested that media exposure to terrorism can be considered as a lower-severity exposure and that the responses of individuals to this low-impact exposure can be determined by preexisting vulnerabilities (Neria & Sullivan, 2011). Despite the existing literature, there is no sufficient evidence to decide whether people develop PTS symptoms in response to media exposure or people who already experience stress symptoms are drawn more to follow the media about the details of the event.

In the present study, the only post-event factor that significantly contributed to explain the level of PTS was intrusive rumination. According to the results, higher engagement in intrusive rumination predicted greater levels of PTS as it was hypothesized (Hypothesis 5). This result is in accord with various literature findings indicating a positive association between event-related intrusive rumination and posttraumatic stress symptoms (Ehring et al., 2008; Morris & Shakespeare-Finch, 2011; Razik et al., 2013). It was assumed that involuntary repetitive thinking (i.e., intrusive rumination) about the event and/or its consequences results from the initial automatic efforts to

reduce extreme stress in response to the challenge of traumatic experience (Cann et al., 2011; Ehlers & Clark, 2000; Tedeschi et.al, 1998). However, the high levels of these repetitive thoughts trigger more re-experiencing and arousal symptoms and hinder the coping efforts that could facilitate successful processing of the event. In order to be able to promote making sense of the event, rumination needs to evolve to be more deliberate (Cann et al., 2011; Tedeschi & Calhoun, 2004).

As for the world assumptions, negative assumptions of benevolence of the world and positive assumptions of justice/controllability were found to predict higher levels of PTS in the present study (Hypothesis 7 was partially supported). Although the contributions of these assumptions in explaining PTS level were found to be small, the findings suggest that more positive assumptions about the benevolence of the world were associated with lower PTS while more positive assumptions of justice/controllability were associated with higher PTS. These results are partially consistent with the previous studies showing a negative association between world assumptions and PTS (Dekel et al., 2004; Freh et al., 2013; Solomon et al., 1997; Yuan et al., 2011). As many theorists suggested, people tend to hold positive assumptions about the world and the self and traumatic events challenge these existing assumptions (Calhoun & Tedeschi, 1998; Horowitz, 1980; Janoff-Bullman 1992). Facing with this challenge can result in increased level of stress reactions. According to Janoff-Bullman (1992), the more conflict between the existing assumptions and the reality of the traumatic event are, the greater the challenge and hence the stress it creates. If the person fails to solve the conflict and to integrate the new reality with the existing assumptions, the stress symptoms may persist. In the light of these theoretical approaches, an explanation for the current findings regarding the negative association between assumptions of benevolence and PTS can be suggested. That is, following the intentional and indiscriminate acts of terrorism, individuals may start to perceive the world and the people as less benevolent and more evil. These more negative perceptions about the goodness in the world trigger the sense of vulnerability, and result in greater stress symptoms. As for the current findings regarding the positive association between assumptions of justice/controllability and PTS symptoms, two possible explanations can be suggested. Since terror attacks are unpredictable and random, exposure to terror severely conflicts with the idea that world is a just and

controllable place. Those who hold more positive beliefs about justice/controllability of the world might be the ones who experience the greater conflict, which results in experiencing greater PTS symptoms. Alternatively, the reports of more positive beliefs in justice/controllability can also be a sign of an ineffective defense mechanism that reflects the need of individuals for the idea of a just and predictable world in response to the heightened level of PTS. Since the assumptions were not assessed longitudinally in the present study, it is not clear whether these were assumptions held prior to the terror events or whether assumptions were changed with the impact of the event. Thus, a clear conclusion about the association between the world assumptions and PTS could not be provided.

4.2.1.1 Predictors of Intrusion, Hyperarousal and Avoidance

In terms of three symptom clusters of PTS, separate hierarchical regression analyses revealed that being older and having lower education level predicted greater level of intrusion and hyper-arousal symptoms as was found for the level of overall PTS. Similarly, being female and having a previous traumatic experience were predictors of both intrusion and hyperarousal symptoms until the intrusive rumination were in the regression equations. As for the avoidance, none of the pre-event factors was significantly predictive of the level of avoidance symptoms except for female gender till the entrance of intrusive rumination.

In relation to the characteristics of the event, experiencing the terror attack via direct exposure as compared to other types of exposure was associated with increased level of intrusion symptoms. Moreover, higher level of total media exposure to the details of the attack was the predictor of increased levels of all three types of symptoms as in overall PTS, however; it becomes insignificant when the intrusive rumination was added to the regression equation for hyperarousal and avoidance symptoms. Likewise, higher number of terror attacks selected as distressing was the significant predictor of both intrusion and hyperarousal and more time elapsed since the most distressing attack was the predictor of hyperarousal until the intrusive rumination were included in the analysis. Thus, in the last steps of the regressions, none of the attack-related factors remained as significant predictors of hyperarousal and avoidance symptoms whereas direct exposure and the level of total media exposure remained as significant

predictors of intrusion symptoms. The finding that direct exposure predicts greater level of intrusion symptoms as compared to indirect or no exposure except for media is in line with a variety of studies showing a dose-response relationship between severity of terror exposure and the experience of adverse outcomes (DiGrande et al., 2010; Garcia-Vera et al., 2016; Neria et al., 2007). According to this literature, being personally exposed or having a close one injured/died in the terrorist attack (i.e., direct exposure) increases the risk and severity of the posttraumatic symptoms. Intrusion symptoms (e.g., intrusive thoughts, recurrent dreams, flashbacks related to the event) reflect that the cognitive processing of the traumatic event still continues, therefore it can be said that those who experienced the terror attack via direct exposure were still processing the event and its consequences. As stated previously, in the present study several event-related factors became insufficient in predicting the levels of intrusion, arousal and avoidance symptoms when the intrusive rumination was added to the regression. This means that event-related factors may have an influence on the symptom levels by determining the level of intrusive rumination that the individuals will engage in. Surely, this possible mediating effect of ruminations is required to be tested in future studies.

In terms of the contribution of post-event characteristics to explaining three domains of PTS, intrusive rumination was the only variable that predicted all three symptom clusters as well as overall PTS level. According to the results, engaging in more intrusive rumination was associated with higher levels of intrusion, hyperarousal and avoidance symptoms. These results were in accordance with the previously discussed results regarding the positive association between intrusive rumination and PTS level. Fatalistic coping was also found to be a significant predictor of avoidance symptoms until the assumption of self-control was added to the regression. Fatalistic coping as an emotion-focused way of coping is characterized with believing in destiny and accepting the event as it is. For the present study, it can be said that more use of fatalistic coping and stronger belief in self-control were both associated with greater avoidance, with the latter contributing more to the explained variance.

Among the world assumptions, as it was the case in total PTS, more negative assumptions about the benevolence of the world and more positive assumptions of justice/controllability predicted greater hyper-arousal symptoms and intrusion

symptoms respectively. In addition, more positive assumptions of self-controllability predicted higher levels of avoidance symptoms. It can be expected that individuals who think that they can control what happens to them by engaging in precautionary behaviors tend to avoid anything related to the event to control their high level of stress. For example, these people may avoid the road where the explosion occurred, or may not talk about the emotions that the attack created. This strategy may seem to be effective in the short term, however; it helps to maintain the symptoms by hindering the processing of the event in the long run.

4.2.2 Predictors of PTG and Its Five Domains

In the current study, five-step hierarchical multiple regression analyses via stepwise method were performed separately with overall PTG and its five domains –new possibilities, spiritual change, relating to others, personal strength, and appreciation of life as the criterion variables. The predictor variables and the steps were the same as the previous analyses with PTS, with a difference that PTS variables (i.e., intrusion, hyperarousal and avoidance) were added to the regression as the fifth step since previous literature provided evidence for the predictive role of PTS symptoms in explaining PTG.

The results of the present study revealed that previous traumatic experience, exposure to a terror attack, the level of total media exposure about the most distressing terror attack, seeking social support/optimistic coping, fatalistic coping, deliberate rumination related to the attack, assumption of justice/controllability, and intrusion symptoms were positive associates of the overall PTG level. However, exposure to the terror attack and the level of total media exposure to the most distressing terror attack no longer contributed to explaining PTG level when deliberate rumination was included in the regression equation.

In terms of pre-event factors, partially supporting the Hypothesis 1, the only significant predictor of PTG was the history of a previous traumatic experience. The current results showed a positive association between the presence of previous traumatic experience and the reported levels of PTG. It is possible that people with previous traumatic experiences can be more ready to be triggered by the terror exposure and to perceive greater threat, which carries more risk for the higher levels of stress. On the

other hand, they may also have more effective ways of coping to deal with the stress and reprocess the event in a more intentional way. So, these people may experience greater stress but also greater chance to find meaning in the experience.

In relation to the event-related factors, none of them remained as significant predictors of PTG in the last step of the regression. However, exposure to the attack (direct or indirect exposure) versus no exposure except for media and the higher level of total media exposure were associated with greater level of PTG until the deliberate rumination was added to the regression. Previous research provided evidence for the positive association between level of terror exposure and reports of PTG (Hobfoll et al., 2006; Maercker & Herrle, 2003; Park et al., 2008). The current results may reflect a possible mediating role of deliberate rumination on the relationship between terror exposure-related factors and PTG. As Tedeschi and Calhoun (2004) suggested, posttraumatic growth takes place only if the traumatic experience is challenging enough to initiate the processing of the event to reduce the emotional distress. It is possible that the higher level of exposure poses greater challenge to the existing reality of the individuals. The greater challenge was found to predict both intrusive and deliberate rumination, with the latter having strong direct effect on PTG (Triplett et al., 2012).

Regarding the post-event variables, the results of the current study showed that deliberate rumination, seeking social support/optimistic coping and fatalistic coping predicted growth in the aftermath of terror attacks (Hypothesis 4 and 6 were supported). According to the results, there was a positive association between engaging in deliberate rumination and developing growth. Both theory and research suggested that more deliberate rumination is beneficial in facilitating growth (Cann et al., 2011; Gul & Karanci, 2017; Tedeschi & Calhoun, 2004; Garcia-Vera et al., 2016). On the contrary to initial automatic cognitive processing (i.e., intrusive rumination), deliberate rumination includes more intentional efforts to reduce emotional distress and to reprocess the event and its consequences. With the contribution of coping strategies, these efforts can lead the individual to reconstruct the shattered reality, to make sense of what happened, and thus to experience growth (Tedeschi & Calhoun, 2004). It was suggested that ways of coping play an important role in the process of positive psychological changes (Tedeschi & Calhoun, 2004; Schaefer & Moss, 1992).

The results of the current study revealed that more use of seeking social support/optimistic coping and fatalistic coping predicted greater growth in the aftermath of terrorism. Previous research supported evidence for the positive association between seeking social support/optimistic coping and growth (Prati & Pietrantoni, 2009). Seeking social support and optimistic coping is an adaptive way of coping characterized with active efforts to deal with the event and the associated emotions. By this way of coping, people believe that there is a way out, try to look at the event from a different perspective and seek for emotional support from others. Seeking social support coping may increase the quality and the quantity of the social support (Prati & Pietrantoni, 2009) and optimistic coping may also serve as a facilitator for the use of active coping strategies. In relation to fatalistic coping, as mentioned before, it is an emotion-focused coping characterized with believing in fate and accepting the event as it is. By engaging in fatalistic coping, individuals make use of religious or spiritual beliefs to deal with the emotional impact of the traumatic experience. More frequent use of fatalistic coping was found to be associated with higher growth in several studies with Turkish samples (Karanci et al., 1999; Kesimci et al., 2005). Karanci and her colleagues (1999) interpreted these previous findings as related to cultural factors. They stated that some items of fatalistic coping (e.g. 'I believe in that God knows the best', 'I go along with fate') may reflect the religious beliefs of the Turkish people. They also emphasized that the use of fatalistic coping does not imply being passive and helpless. Instead, fatalistic coping of Turkish participants may reflect beliefs that adverse events occur only with the consent of the God; and if God lets these events to happen, they have some positive consequences in the long run, even though they do not seem positive at all. Thus, people may hold more hopeful attitudes in reevaluating the event and think that there must be something beneficial in this negative experience. The results are also in line with the findings of Butler et al. (2005) showing that religious coping facilitated spiritual change in the aftermath of terrorism by helping the individual to find meaning in the traumatic experience. The results of the current study also replicated the previous findings indicating that both problem-focused and emotion-focused ways of coping were positively associated with PTG (Linley & Joseph, 2004).

In terms of the world assumptions, assumption of justice/controllability was the only significant predictor of PTG. Supporting the Hypothesis 8, the results showed that a stronger belief in a just and predictable world was associated with greater levels of PTG. This result is consistent with the wider literature indicating a positive association between different dimensions of world assumptions and growth in the aftermath of various traumatic experiences (Dekel et al., 2010; Valdez & Lilly, 2015). The association between stronger beliefs in justice/controllability and perceived growth may reflect a more successful reconstruction of supposedly shattered assumptions in the process of growth. It may also reflect a defensive coping mechanism in which people have positive illusions regarding the justice and predictability of the world as a response to the brutality and uncontrollability of the terror attacks.

As a last step of hierarchical regression analyses for five domains of PTG, the contributions of the three types of posttraumatic stress symptoms were examined in order to test Hypothesis 9. The results showed that higher level of intrusion symptoms predicted greater growth as hypothesized. This finding is in agreement with previous body of research which consistently indicated that intrusion symptoms of PTSD is positively associated with posttraumatic growth (Helgeson et al., 2006; Jaarsma, Pool, Sanderman, & Ranchor, 2006; Park & Fenster, 2004; Shakespeare-Finch & De Dassel, 2009; Xu & Liao, 2011). It was suggested that PTS symptoms, especially intrusion symptoms, can be evaluated as a sign of a struggle in the aftermath of the trauma experience to process the event, enhancing the process of benefit finding and growth (Zoellner & Maercker, 2006; Joseph & Linley, 2005).

4.2.2.1 Predictors of Five Domains of PTG

In terms of five domains of PTG, separate hierarchical regression analyses revealed that being older and having a previous traumatic experience were associated with greater change on the dimensions of personal strength and appreciation of life. Those who are older and/or having a history of traumatic experience have more experience with life stress and trauma and thus they may be more prone to perceive greater threat. By greater involvement and struggling with these experiences, they may also have greater chance to recognize their strength and value of their lives. The results also indicated that being female, having a lower level of education, and not receiving

current psychological help predicted greater reports of change on spiritual change dimension. However, female gender lost its significance when deliberate rumination was added to the regression equation. Although previous studies showed that having a higher level of education facilitates posttraumatic growth (Hall et al., 2009; Karanci, Işıklı et al., 2012; Xu & Liao, 2011), the results of the current study showed a negative association between education level and spiritual change domain of PTG. This finding can be explained by possible differences in the use of religious or spiritual way of thinking which is negatively related to the level of education and positively related to growth in general (Frazier et al., 2001) and spiritual change (Butler et al., 2005).

In relation to association between event-related factors and different domains of PTG, the only significant association in the final models was found between the time passed since the attack and the change in personal strength. According to the results, more time since the most distressing attack predicted less reports of change in personal strength. The empirical findings related to the association between time and growth seems to be mixed (Butler et al., 2005; Helgeson et al., 2006; Frazier et al., 2001; Widows et al., 2005). Although the theories generally assume that a longer time after the traumatic experience is needed for the development of PTG, they also acknowledge that growth can occur soon after the trauma (Tedeschi & Calhoun, 2004; Schaefer & Moss, 1992). However, it is still expected that level of growth increases over time especially for some domains like personal strength (Frazier et al., 2001). Some previous studies speculated that greater reports of growth in short term may partially reflect 'motivated illusions' that help people cope with threatening life experiences (McFarland & Alvaro, 2000). The present study also revealed that being exposed to the attack (direct or indirect exposure) as compared to being non-exposed predicted greater change in the domains of new possibilities, relating to others, and personal strength and that higher level of total media exposure predicted more change in relating to others and personal strength domains. However; they all lost their significance to predict growth in related domains when deliberate rumination was entered into the regression as it was the case in total PTG.

The results regarding the post-trauma variables contributing to explaining five domains of PTG were very similar to those of total PTG level. According to the results, engaging in more deliberate rumination was the only post-event factor that was

associated with greater changes in all of the five domains and overall PTG level. Moreover, more use of seeking social support/optimistic coping predicted higher level of change in all domains except for appreciation of life while more use of fatalistic coping predicted greater change in all domains except for relating to others. These findings are in line with the current results for total PTG, therefore since they were discussed in the previous part further elaboration will not be given. The ways of coping predicting the five domains and total PTG differed in the domains of appreciation of life and relating to others. In addition to fatalistic coping, greater use of problem-solving coping was found to be associated with higher reports of appreciation of life. Also, besides the seeking social support/optimistic coping, more use of helplessness coping predicted more change in relating to others dimension of PTG. Problem-solving approach is an adaptive way of coping characterized with intentional attempts to deal with the problem (Folkman & Lazarus, 1985). The support for the association between problem solving coping and appreciation of life is evident from previous studies showing that using active or problem-focused coping strategies facilitated PTG (Bussell & Naus, 2010; Dirik & Karanci, 2008; Göral et al., 2006; Urcuyo et al., 2005). It was suggested that problem-focused coping facilitates intentional efforts for the cognitive processing about the traumatic event, helping the individual to reevaluate the event and make meaning out of it, thus show growth. As for the helplessness coping, its positive association with the dimension of relating to others in the current study was an interesting finding. Helplessness coping is a passive, emotion-focused way of coping, which was generally found to be associated with adverse outcomes in the aftermath of trauma. However, since seeking social support/optimistic coping was also a predictor of change in the relating to others dimension, it can be speculated that in the context of collective trauma like terrorism, those who use helplessness coping approach (e.g., 'I wish I could change what happened.', 'I feel like trapped') may also tend to feel close to many others affected by the trauma and share these emotions with them. That is, they may use both emotion focused (i.e., helplessness coping) and problem-focused (i.e., seeking social support/optimistic) coping, which predict greater change in relating to others dimension.

In terms of the world assumptions, stronger assumptions of justice-controllability predicted greater change in the new possibilities, relating to others, and personal

strength domains, as were the case in overall PTG level. Additionally, assumption of self-worth was found to be positively associated with the changes in the domains of relating to others and appreciation of life. This was consistent with theoretical assumptions that posttraumatic growth will be associated with more positive assumptions about the world and the self. Also, the assumption of randomness was negatively associated with the spiritual change. As discussed previously, fatalistic coping plays an important role in explaining spiritual change and reflects the beliefs in fate and the trust that god knows the best. On the other hand, assumption of randomness involves beliefs that it is just chance that certain things happen to certain people. Therefore, it is quite expected that stronger beliefs in the randomness will be associated with less spiritual change. Lastly, assumption of self-control was found to be associated with the appreciation of life, however, it became insignificant when the avoidance symptoms were added to the regression. This means that self-control assumption and the avoidance symptoms shared some variance to explain the changes in appreciation of life but the latter contributed more to the explained variance.

Lastly, the contribution of three symptom clusters of PTS was examined in relation to explaining the five domains of PTG. According to the results, the level of avoidance symptoms was found to be the only predictor of the changes in new possibilities and appreciation of life. The support for these findings was evident from a meta-analysis indicating that growth was positively associated with avoidance and intrusion symptoms (Helgeson et al., 2006).

4.3 Strengths and Clinical Implications

With the rise of terrorism in the world, the efforts to understand the psychological aftermath of exposure to terrorism have increasingly become the subject of studies. Many studies have been devoted to investigate the processes and the factors behind development of adverse psychological outcomes and positive outcomes in the aftermath of terrorism although studies on the latter were much scarce. Despite this worldwide interest, there are surprisingly little evidence for the psychological impact of the ongoing terrorist attacks in the Turkey. The existing few research studies focused on only negative outcomes in relation to a single terror attack, which is insufficient to explain the situation in Turkey characterized with repeated exposure to

continuing threat of terrorism. As far as it is known, there were one published qualitative study that explored the posttraumatic growth as well as posttraumatic stress in indirect victims of a terrorist attack in Turkey (Okay & Karanci, 2019). Thus, the current study provides a chance for a better understanding of the psychological impact of the terrorism by focusing on both positive (i.e. posttraumatic growth) and negative consequences (i.e. posttraumatic stress) in the same sample. The current study is also important since it includes both direct and indirect victims of terrorism and considers media as a potential source of exposure. Moreover, the present study provided an opportunity to examine the impact of exposure-related factors along with several pre-event and post-event factors on PTS and PTG. Also, by looking at each dimension of both PTS and PTG separately, the present study provided an in-depth investigation of differential contribution of the associated factors. The results of the study can be useful in designing support programs for the survivors of terror events.

With the contribution of all these mentioned strengths, the results revealed important information in respect to the factors associated with the psychological consequences of terrorism. By understanding the factors contributing to the development of posttraumatic stress and growth, mental health professionals may try to facilitate growth and decrease distress in the affected community or individual based contexts. The results of the study acknowledge the strength of the people in their struggle with the impact of the terrorism. Despite the psychological burden of terrorism, some people can also utilize adaptive ways of coping, work on the impact of the attack in a more intentional way and hence, experience positive transformations. Thus, it is important to identify the adaptive and maladaptive styles of coping that affect the post-attack adaptation of the individuals who seek help. Then, individuals should be encouraged to recognize their resources and to use more active coping strategies such as seeking social support and for engaging in more deliberate rumination about the attack and its consequences. Also, clinicians should evaluate the posttraumatic stress symptoms as a sign of struggle to make sense of what happened rather than considering them merely as symptoms to be reduced. Psycho-education programs focusing on disseminating information on possible effects of attacks and coping would be helpful to support the survivors. Results also highlighted the facilitating role of positive assumptions of justice and controllability on the development of posttraumatic growth.

The finding implies that helping the affected community to restore beliefs that the world is a relatively just and controllable place can foster the process of growth. The current results also point out that exposure to terrorism through media can be a risk factor for the development of PTS symptoms. Therefore, in a clinical setting, helper should be aware of this risk and investigate the impact of media consumption on the present status of the client. In a community level, the public and the authorities can be informed about the potential traumatic impact of media consumption on terror related content. By this, both those who produce intrusive media content and those who consume it should be targeted. In addition to more conscious consumption of the terror-related media content, this could also help the individuals to adopt beliefs of controllability about the content they were exposed.

In addition to strengths and clinical implications, in the next part limitations of the current study and directions for future research will be discussed.

4.4 Limitations and Suggestions for Future Research

Although the present study provides evidence for the association between terror-related media consumption and the development of PTS symptoms, it does not take the content of media coverage into account. By different means of media coverage, people can be exposed to not only the images/videos of the terror acts, but also the statements of the authorities and the politicians, reactions of the public, actions of the institutions. The messages that these contents carry can have an impact on the individuals' perception of the terror act and its consequences. Therefore, future studies can further investigate the content of the media coverage that people are exposed to and its relevance in terms of posttrauma adaptation or basic assumptions of the people.

Despite the fact that many of the expected factors contributed to the PTS and PTG levels in the current study, still a higher proportion of the variance in outcome variables was found to be not explained by the study variables. This shows the need for future research to examine the role of other factors.

The present study has several limitations. The first limitation is the use of the cross-sectional study design which prevents causal conclusions. Instead of collecting all the data at one time, use of longitudinal designs is required to draw causal conclusions.

Secondly, data collection required participants to think retrospectively, which may result in biased reports or simply biased reports due to the difficulties in remembering. Moreover, data was collected via self-report tools. However, especially for some concepts like world assumptions or posttraumatic growth, it may not be easy to be consciously aware of the related notion. A better method might be to use of interviews with more indirect questions capturing the related concept. The use of internet-convenient sampling is another limitation of the study, which creates a problem regarding the representativeness of the sample and generalizability of the results. So, future research is required to replicate the current findings in different samples. Also, epidemiological studies with community-representative samples are needed to assess the psychological impact of terrorism across the country and to develop intervention strategies.

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APPENDICES

APPENDIX A: SOCIODEMOGRAPHIC INFORMATION FORM

1. Yaşınız:	**2.** Cinsiyetiniz:
3. Medeni durumunuz: Bekâr☐ Birlikte Yaşıyor☐ Evli☐ Boşanmış☐ Eşini Kaybetmiş☐	
4. Yaşadığınız şehir:	
5. Şu anda öğrenci misiniz? Evet ☐ Hayır ☐	
6. Eğitim durumunuz (*son mezun olduğunuz okula göre belirtiniz*): Okuryazar ☐ İlkokul ☐ Ortaokul ☐ Lise mezunu ☐ Yüksekokul ☐ Üniversite ☐ Yüksek Lisans ☐ Doktora ☐	
7. Şu anda çalışıyor musunuz? Evet ☐ Hayır ☐ Evet, ise ne iş yaptığınızı belirtiniz:	
8. Mesleğiniz:	
9. Gelir düzeyiniz: Alt ☐ Alt-Orta ☐ Orta ☐ Üst-Orta ☐ Üst ☐	
10. Herhangi bir psikiyatrik rahatsızlığınız var mı? Evet ☐ Hayır ☐ Evet, ise belirtiniz:	
11. Şu anda ruhsal sorunlarınız için bir yardım alıyor musunuz? Evet ☐ Hayır ☐ Evet, ise ne tür bir yardım aldığınızı belirtiniz (Psikoterapi, İlaç tedavisi vb.):	
12. Daha önce ruhsal sorunlarınız için bir yardım aldınız mı? Evet ☐ Hayır ☐ Evet, ise ne tür bir yardım aldığınızı belirtiniz (Psikoterapi, İlaç tedavisi vb.):	

APPENDIX B: TRAUMATIC EVENT CHECKLIST

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 deprem)	☐
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	☐
13. Maddeyi işaretlediyseniz aşağıda bu travmatik olayı kısaca anlatınız: _____ _	
14. Herhangi bir travmatik olay yaşamadım.	☐

APPENDIX C: WORLD ASSUMPTIONS SCALE (WAS)

Lütfen, aşağıdaki ölçekte yer alan ifadelere ne kadar katıldığınızı ya da karşı olduğunuzu belirtiniz. Her bir ifadeyi okuduktan sonra, o ifadeye ne kadar katıldığınızı ya da karşı olduğunuzu, yanında yer alan bölmedeki uygun rakamı seçerek işaretleyiniz:

1=kesinlikle katılmıyorum ----- 2 ------ 3 ----- 4 ----- 5 ----- 6 = tamamen katılıyorum

1. İnsanlar doğaları gereği arkadaşlık ve nezaketten uzaktır.	(1)	(2)	(3)	(4)	(5)	(6)
2. Kötü olaylar insanlara tesadüfî olarak denk gelir.	(1)	(2)	(3)	(4)	(5)	(6)
3.İnsan doğası temelde iyidir.	(1)	(2)	(3)	(4)	(5)	(6)
4. Bu dünyada kötü olaylardan çok daha fazla iyi şey yaşanır.	(1)	(2)	(3)	(4)	(5)	(6)
5. Hayatımızın gidişatı büyük ölçüde tesadüflere bağlıdır.	(1)	(2)	(3)	(4)	(5)	(6)
6. İnsanlar genellikle yaşadıklarını hak ederler.	(1)	(2)	(3)	(4)	(5)	(6)
7. Sık sık, aslında iyi bir insan olmadığımı düşünürüm.	(1)	(2)	(3)	(4)	(5)	(6)
8. Dünyada kötülükten çok iyilik vardır.	(1)	(2)	(3)	(4)	(5)	(6)
9. Temelde şanslı bir insanımdır.	(1)	(2)	(3)	(4)	(5)	(6)
10. İnsanların kötü kaderleri yaptıkları hatalardan kaynaklanır.	(1)	(2)	(3)	(4)	(5)	(6)
11. İnsanlar, bir başka insana ne olduğunu umursamazlar.	(1)	(2)	(3)	(4)	(5)	(6)
12. Genellikle benim yararıma olan sonuçları çoğaltacak şekilde davranırım.	(1)	(2)	(3)	(4)	(5)	(6)
13. İnsanlar eğer kendileri de iyiyse iyi bir talihe sahip olurlar.	(1)	(2)	(3)	(4)	(5)	(6)
14. Yaşam tesadüflere bağlı belirsizliklerle doludur.	(1)	(2)	(3)	(4)	(5)	(6)
15. Çok şanslı bir insan olduğumu düşünürüm.	(1)	(2)	(3)	(4)	(5)	(6)
16. Hemen her zaman başıma kötü şeylerin gelmesini engellemek için çaba harcarım.	(1)	(2)	(3)	(4)	(5)	(6)
17. Kendime ilişkin olumsuz düşüncelere sahibim.	(1)	(2)	(3)	(4)	(5)	(6)
18. İyi insanlar bu dünyada hak ettiklerini yaşarlar.	(1)	(2)	(3)	(4)	(5)	(6)
19. Kendi davranışlarımızla başımıza kötü şeylerin gelmesini engelleyebiliriz.	(1)	(2)	(3)	(4)	(5)	(6)
20. Hayatıma baktığımda şansın yüzüme güldüğünü fark ediyorum.	(1)	(2)	(3)	(4)	(5)	(6)
21. Eğer insanlar tedbirli davranırlarsa pek çok talihsizliğin önüne geçilebilir.	(1)	(2)	(3)	(4)	(5)	(6)
22. Kendimi talihsizliklerden korumak için gerekli olan önlemleri alırım.	(1)	(2)	(3)	(4)	(5)	(6)
23. Genel olarak yaşam bir kumardır.	(1)	(2)	(3)	(4)	(5)	(6)
24. Dünya iyi bir yerdir.	(1)	(2)	(3)	(4)	(5)	(6)
25. İnsanlar temelde nazik ve yardımseverdir.	(1)	(2)	(3)	(4)	(5)	(6)
26. Genellikle benim için en iyisi olacak şekilde davranırım.	(1)	(2)	(3)	(4)	(5)	(6)
27. Kendim olmaktan son derece memnunum.	(1)	(2)	(3)	(4)	(5)	(6)
28. Kötü şeyler olduğunda bunun nedeni tipik olarak insanların kendilerini korumak için gerekenleri yapmamasıdır.	(1)	(2)	(3)	(4)	(5)	(6)
29. Eğer yeterince yakından bakarsan dünyanın iyiliklerle dolu olduğunu görürsün.	(1)	(2)	(3)	(4)	(5)	(6)
30. Kişisel özelliklerimden utanmak için nedenim var.	(1)	(2)	(3)	(4)	(5)	(6)
31. Pek çok insandan daha şanslıyım.	(1)	(2)	(3)	(4)	(5)	(6)

APPENDIX D: EXPOSURE TO TERROR ATTACK INVENTORY

Türkiye'de son yıllarda oldukça fazla terör saldırısı yaşanmaktadır. Aşağıda, Haziran 2015'ten itibaren ülkenin farklı yerlerinde yaşanan ve sivil insanların zarar gördüğü terör saldırılarının listesi yer almaktadır. Lütfen öncelikle listenin tamamını okuyunuz. Bu olayların tümünden etkilenmiş olabilirsiniz ancak lütfen **nispeten daha çok** etkilendiğinizi düşündüğünüz olayı/olayları işaretleyiniz. ***Birden fazla olayı işaretleyebilirsiniz.***

1. Diyarbakır HDP Mitingi Saldırısı, 5 Haziran 2015	
2. Şanlıurfa Suruç Saldırısı, 20 Temmuz 2015	
3. İstanbul Sultanbeyli Polis Merkezi Saldırısı, 10 Ağustos 2015	
4. Ankara Tren Garı Saldırısı, 10 Ekim 2015	
5. İstanbul Sabiha Gökçen Havalimanı Saldırısı, 23 Aralık 2015	
6. İstanbul Sultanahmet Saldırısı, 12 Ocak 2016	
7. Diyarbakır Çınar Emniyet Müdürlüğü Saldırısı, 13 Ocak 2016	
8. Ankara Merasim Sokak Saldırısı, 17 Şubat 2016	
9. Ankara Kızılay Otobüs Durağı Saldırısı, 13 Mart 2016	
10. İstanbul İstiklal Caddesi Saldırısı, 19 Mart 2016	
11. Bursa Merkez Saldırısı, 27 Mart 2016	
12. Diyarbakır Otogar Civarı Saldırısı, 31 Mart 2016	
13. Mardin Kızıltepe Saldırısı, 1 Nisan 2016	
14. Gaziantep Emniyet Müdürlüğü Saldırısı, 1 Mayıs 2016	
15. Diyarbakır Bağlar Saldırısı, 10 Mayıs 2016	
16. İstanbul Sancaktepe Saldırısı, 12 Mayıs 2016	
17. Diyarbakır Dürümlü Köyü Saldırısı, 12 Mayıs 2016	
18. İstanbul Vezneciler Saldırısı, 7 Haziran 2016	
19. Mardin Midyat Saldırısı, 8 Haziran 2016	
20. İstanbul Atatürk Havalimanı Saldırısı, 28 Haziran 2016	
21. Türkiye Askeri Darbe Girişimi, 15 Temmuz 2016	
22. Elazığ Emniyet Müdürlüğü Saldırısı, 18 Ağustos 2016	
23. Gaziantep Sokak Düğünü Saldırısı, 20 Ağustos 2016	
24. Şırnak Cizre Emniyet Müdürlüğü Saldırısı, 26 Ağustos 2016	
25. İstanbul Yenibosna Saldırısı, 6 Ekim 2016	
26. Hakkâri Şemdinli Jandarma Karakolu Saldırısı, 9 Ekim 2016	
27. Diyarbakır Bağlar Emniyet Binası Saldırısı, 4 Kasım 2016	
28. Mardin Derik Kaymakamlık Saldırısı, 10 Kasım 2016	
29. Adana Valiliği Otoparkı Saldırısı, 24 Kasım 2016	
30. İstanbul Beşiktaş Saldırıları, 10 Aralık 2016	
31. Kayseri Saldırısı, 17 Aralık 2016	
32. İstanbul Ortaköy Gece Kulübü Saldırısı, 01 Ocak 2017	
33. İzmir Bayraklı Adliye Saldırısı, 05 Ocak 2017	
34. Diğer *(Nerede ve ne zaman gerçekleştiğini belirtiniz)*	

- Az önce işaretlediğiniz terör olayları sebebiyle ruhsal bir yardım aldınız mı?
  Evet ☐ Hayır ☐
  - Evet, ise ne tür bir yardım aldığınızı belirtiniz (Psikoterapi, İlaç tedavisi vb.):
    _____
  - Yardım almaya halen devam ediyor musunuz? Evet ☐ Hayır ☐

- Yukarıda işaretlediğiniz olaylardan sizi **EN ÇOK** etkilediğini düşündüğünüz olayın madde numarasını yazınız. _____
  - Bu olayda sizi etkileyen neydi?
    _____

LÜTFEN BUNDAN SONRAKİ TÜM SORULARI BİRAZ ÖNCE SİZİ EN ÇOK ETKİLEDİĞİNİ BELİRTTİĞİNİZ TERÖR OLAYINI DÜŞÜNEREK YANITLAYIN.

	EVET	**HAYIR**
9. Olayın yakınındaydım ancak olaya tanık olmadım.		
10. Olay sırasında oradaydım ve olaya birebir tanık oldum.		
11. Olayda fiziksel olarak yaralandım.		
12. Olayda bir yakınımın başına bir şey gelmiş olabileceğini düşündüm.		
13. Bir yakınım olay sırasında oradaydı ve olaya birebir tanık oldu.		
14. Olayda bir yakınım fiziksel olarak yaralandı.		
15. Olayda bir yakınımı kaybettim.		
16. İşim gereği olayla ilgili pek çok detaya maruz kaldım.		

	Hiç	**Nadiren**	**Bazen**	**Sık sık**	**Çok sık**
1. Olayla ilgili haberleri ve ayrıntıları televizyondan takip ettim.	0	1	2	3	4
2. Olayla ilgili haberleri ve ayrıntıları radyodan takip ettim.	0	1	2	3	4
3. Olayla ilgili haberleri ve ayrıntıları gazetelerden takip ettim.	0	1	2	3	4
4. Olayla ilgili haberleri ve ayrıntıları internet sitelerinden takip ettim.	0	1	2	3	4
5. Olayla ilgili haberleri ve ayrıntıları sosyal medyadan takip ettim.	0	1	2	3	4

APPENDIX E: THE IMPACT OF EVENT SCALE – REVISED (IES-R)

Aşağıda, stresli bir yaşam olayından sonra insanların yaşayabileceği bazı zorlukların bir listesi sunulmuştur. Her cümleyi dikkatlice okuyunuz. GEÇTİĞİMİZ YEDİ GÜN İÇERİSİNDE, ***yukarıda sizi en çok etkilediğini belirttiğiniz terör olayını düşünerek***, bu zorlukların sizi ne kadar rahatsız ettiğini cümlelerin sağındaki beş kutucuktan yalnızca birini işaretleyerek belirtiniz.

	Hiç	**Biraz**	**Orta**	**Fazla**	**Çok fazla**
1. Benzeyen her şey olayla ilgili duygularımı aklıma getiriyor ve hatırlatıyor.	0	1	2	3	4
2. Uykumu sürdürmekte, kesintisiz ve derin bir uyku uyumakta zorlanıyorum, uykum bölünüyor.	0	1	2	3	4
3. Olayla ilgisiz ve farklı şeyler dahi bana olayı hatırlatıyor, aklıma getiriyor ve düşündürüyor.	0	1	2	3	4
4. Kendimi huzursuz ve öfkeli hissediyorum.	0	1	2	3	4
5. Olayı düşündüğümde, olayı hatırlatan şeylerle karşılaştığımda keyfimin kaçmasına canımın sıkılmasına izin vermiyorum.	0	1	2	3	4
6. İstemediğim halde olay aklıma geliyor ve onu düşünmek zorunda kalıyorum.	0	1	2	3	4
7. Sanki olayı yaşamamışım, olmamış ve gerçek değilmiş gibi hissediyorum.	0	1	2	3	4
8. Olayı hatırlatan durum, yer ve koşullardan uzak duruyorum, kaçınıyorum.	0	1	2	3	4
9. Olayla ilgili görüntüler fotoğraf gibi, film gibi gözümün önünde canlanıyor.	0	1	2	3	4
10. Ani ses, görüntü ve hareketlerden çabuk irkiliyorum ve abartılı tepkiler veriyorum.	0	1	2	3	4
11. Olayı düşünmemeye çalışıyorum.	0	1	2	3	4
12. Olayla ilgili birçok duyguyu hala taşıdığımı fark ettim fakat bunların üzerinde durmuyorum ve çözmeye çalışmıyorum.	0	1	2	3	4

13. Sanki bütün duygularımı kaybetmiş gibi hissediyorum Kendimi hissizleşmiş ve donuklaşmış gibi algılıyorum.	0	1	2	3	4
14. Zaman zaman olay sırasındaki duygularımı yeniden hatırlıyorum ve sanki o anı yeniden yaşıyormuş gibi tepkiler gösteriyorum.	0	1	2	3	4
15. Uykuya dalmakta zorluk çekiyorum.	0	1	2	3	4
16. Olayla ilgili yaşadığım duyguları o kadar canlı hatırlıyorum ki, sanki dalga dalga üzerime geliyorlar.	0	1	2	3	4
17. Olayı hafızamdan silmeye ve unutmaya çalışıyorum.	0	1	2	3	4
18. Dikkatimi toplamada ve yoğunlaşmada zorluk çekiyorum.	0	1	2	3	4
19. Olayı hatırlatan şeylerle karşılaştığımda, terleme, kızarma, titreme, çarpıntı, nefes alma güçlüğü, göğüste baskı hissi gibi bedensel belirtiler yaşıyorum.	0	1	2	3	4
20. Olayla ilgili rüyalar görüyorum.	0	1	2	3	4
21. Kendimi tetikte ve diken üstünde hissediyorum, güvenliğimle ilgili endişeler duyuyorum.	0	1	2	3	4
22. Olay hakkında konuşmamaya çalışıyorum.	0	1	2	3	4

APPENDIX F: THE 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 en çok etkilendiğinizi belirttiğiniz terör olayının 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 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 bir şey 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 çalıştım.	0 1 2 3

APPENDIX G: WAYS OF COPING INVENTORY-TURKISH FORM (WCI-T)

Aşağıda insanların sıkıntılarını gidermek için kullanabilecekleri bazı yollar belirtilmektedir. Cümlelerin her birini dikkatlice okuduktan sonra, ***en çok etkilendiğiniz terör olayını düşünerek***, bu yolları hiç kullanmıyorsanız hiçbir zaman, kimi zaman kullanıyorsanız bazen, sıklıkla 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 H: THE POSTTRAUMATIC GROWTH INVENTORY (PTGI)

Aşağıda yer alan her cümleyi dikkatle okuyunuz. En çok etkilendiğinizi belirtmiş olduğunuz terör olayının sonrasında, yaşamınızın bu olaya bağlı olarak ne derece değiştiğini aşağıdaki ölçekte uygun rakamı daire içine alarak belirtiniz.

0 = Olaydan dolayı böyle bir değişiklik yaşamadım.
1 = Olaydan dolayı bu değişikliği çok az yaşadım.
2 = Olaydan dolayı bu değişikliği az derecede yaşadım.
3 = Olaydan dolayı bu değişikliği orta derecede yaşadım.
4 = Olaydan dolayı bu değişikliği oldukça fazla derecede yaşadım.
5 = Olaydan 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 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 I: ETHICS COMMITTEE APPROVAL

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
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08 ŞUBAT 2017

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof.Dr. A. Nuray KARANCI;

Danışmanlığını yaptığınız yüksek lisans öğrencisi Kübra GÖKHAN'ın ***"Posttraumatic Stress and Posttraumatic Growth Through Exposure to Ongoing Terroism: The Roles of World Assumptions, Exposure, Coping and Rumination"*** başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek gerekli onay **2017-SOS-017** protokol numarası ile **08.02.2017 – 15.04.2018** tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.

Prof. Dr. Canan SÜMER
İnsan Araştırmaları Etik Kurulu Başkanı

Prof. Dr. Mehmet UTKU
İAEK Üyesi

Prof. Dr. Ayhan SOL
İAEK Üyesi

Prof. Dr. Ayhan Gürbüz DEMİR
İAEK Üyesi

Doç. Dr. Yaşar KONDAKÇI
İAEK Üyesi

Yrd. Doç. Dr. Pınar KAYGAN
İAEK Üyesi

Yrd. Doç. Dr. Emre SELÇUK
İAEK Üyesi

APPENDIX J: INFORMED CONSENT FORM

Bu araştırma, ODTÜ Klinik Psikoloji Bölümü Yüksek Lisans öğrencisi Kübra Gökhan tarafından Prof. Dr. A. Nuray Karancı danışmanlığındaki yüksek lisans tezi kapsamında yürütülmektedir. Bu form, sizi araştırma koşulları hakkında bilgilendirmek için hazırlanmıştır.

Çalışmanın Amacı Nedir?

Araştırmanın amacı, ülkede süregelen terör olaylarının psikolojik etkileri hakkında bilgi toplamaktır. Bu kapsamda, terör olaylarına ne derece maruz kalındığı, olaylar sonrasında yaşanabilecek ruhsal sıkıntılar, baş etme yolları, olaya ilişkin düşünce süreçleri ve olayla başa çıkma çabaları sonucu olabilecek olumlu etkiler ile ilgili sorular sorulacaktır.

Bize Nasıl Yardımcı Olmanızı İsteyeceğiz?

Araştırmaya katılmayı kabul etmeniz durumunda, sizden ankette yer alan bir dizi soruyu yanıtlamanız beklenmektedir. Bu çalışmaya katılım ortalama 30 dakika sürmektedir.

Sizden Topladığımız Bilgileri Nasıl Kullanacağız?

Araştırmaya katılımınız tamamen gönüllülük temelinde olmalıdır. Ankette, sizden kimlik veya kurum belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız tamamıyla gizli tutulacak, sadece araştırmacılar tarafından değerlendirilecektir. Katılımcılardan elde edilecek bilgiler toplu halde değerlendirilecek ve bilimsel yayımlarda kullanılacaktır.

Katılımınızla ilgili bilmeniz gerekenler:

Araştırmanın güvenilir ve geçerli sonuçlar ortaya koyabilmesi için sizin samimi ve gerçek cevaplar vermeniz ve soruların tamamını yanıtlamanız oldukça önemlidir. Anket genel olarak kişisel rahatsızlık verecek sorular içermemektedir. Ancak, bazı soruları yanıtlarken yaşadığınız zorlu olayları hatırlayıp geçici bir rahatsızlık hissedebilirsiniz. Katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz cevaplamayı yarıda bırakmakta serbestsiniz. Kendinizi aşırı derecede rahatsız hissetmeniz durumunda, Türk Psikologlar Derneği tarafından hazırlanmış "Travmatik Yaşam Olaylarının Psikososyal Etkileri ve Baş Etme Yolları" başlıklı bilgilendirme metnini okuyabilirsiniz (https://www.psikolog.org.tr/?Detail=1519).

Araştırmayla ilgili daha fazla bilgi almak isterseniz:

Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Çalışma hakkında daha fazla bilgi almak için ODTÜ Klinik Psikoloji Yüksek Lisans Öğrencisi Kübra Gökhan (kubragokhann@gmail.com) ile iletişim kurabilirsiniz.

Yukarıdaki bilgileri okudum ve bu çalışmaya tamamen gönüllü olarak katılıyorum. ☐

APPENDIX K: DEBRIEFING FORM

Öncelikle araştırmamıza katıldığınız için teşekkür ederiz. Bu araştırma, daha önce de belirtildiği gibi ODTÜ Klinik Psikoloji Bölümü Yüksek Lisans öğrencisi Kübra Gökhan tarafından Prof. Dr. A. Nuray Karancı danışmanlığındaki yüksek lisans tezi kapsamında yürütülmektedir.

Çalışma sırasında bazı soruları yanıtlarken yaşadığınız zorlu olayları hatırlayıp geçici bir rahatsızlık hissetmiş olabilirsiniz. Kendinizi aşırı derecede rahatsız hissettiyseniz, Türk Psikologlar Derneği tarafından hazırlanmış "Travmatik Yaşam Olaylarının Psikososyal Etkileri ve Baş Etme Yolları" başlıklı bilgilendirme metnini okumanızı öneririz. Metne ulaşmak için linke tıklayabilirsiniz (https://www.psikolog.org.tr/?Detail=1519).

Araştırma sonuçlarını öğrenmek ya da araştırma hakkında daha fazla bilgi almak için ODTÜ Klinik Psikoloji Yüksek Lisans Öğrencisi Kübra Gökhan (kubragokhann@gmail.com) ile iletişim kurabilirsiniz.

Çalışmaya katkıda bulunan bir gönüllü olarak katılımcı haklarınızla ilgili veya etik ilkelerle ilgi soru veya görüşlerinizi ODTÜ Uygulamalı Etik Araştırma Merkezi'ne (e-posta: ueam@metu.edu.tr) iletebilirsiniz.

APPENDIX L: TURKISH SUMMARY/TÜRKÇE ÖZET

1. GİRİŞ

Yirminci yüzyılın sonlarından itibaren terörizmin artarak küresel bir tehdit haline gelmesiyle birlikte, terör eylemlerinin psikolojik etkilerini anlama çabaları da psikoloji alanındaki çalışmaların odağı haline gelmiştir. Çalışmalar, terör eylemlerine maruz kalan kişilerde travma sonrası stres (TSS) gibi psikolojik sorunların yanı sıra travma sonrası gelişim (TSG) gibi olumlu değişimler de gözlendiğini göstermiştir.

Bu çalışmada, Türkiye'de 2015 – 2017 yılları arasında gerçekleşen terör eylemlerinin TSS ve TSG açısından sonuçları ve bu sonuçlarla ilişkili faktörler incelenmiştir. Çalışmanın bu bölümünde, travma kavramı ve terörün travmatik bir olay olarak nasıl deneyimlendiği ele alınacaktır. Ayrıca, TSS ve TSG'yi açıklayan kuramlar ve çalışma bulguları sunulacaktır. Daha sonra, olay öncesi ve olaya ilişkin faktörler, dünyaya ilişkin varsayımlar, ruminasyon, baş etme yolları ve bu faktörlerin TSS ve TSG ile ilişkisi açıklanacaktır. Son olarak, çalışmanın amacı aktarılacaktır.

1.1 Travma Kavramı

Psikiyatrik terminolojide travmanın tanımı ve travmatik olayların özellikleri oldukça tartışılan bir konu olmuştur. Genel olarak, travmatik olaylar ani, beklenmedik ya da olağandışı; kişinin algılanan baş etme becerilerini aşan ve kişinin var olan sistemini, psikolojik ihtiyaçlarını ve şemalarını altüst eden olaylardır (McCann & Pearlman, 1990). Herman (1992) travmatik olayların, nadiren gerçekleştiğinden değil, kişinin yaşantısındaki yıkıcı etkisinden dolayı olağandışı olduğunu belirtmiştir. Nitekim travmatik olayların yaşanma sıklığı oldukça yüksektir. Yapılan yaygınlık çalışmalarına göre, kişilerin yaşamları boyunca en az bir travmatik olay yaşama oranının %55 ile %90 arasında değiştiği bulunmuştur (Boals vd., 2013; Breslau vd., 1998; 2004; Creamer vd., 2001; Darves-Bornoz vd., 2008; De Vries & Olff, 2009;

Ferry vd., 2014; Frans vd., 2005; Kessler vd., 1995; 2017; Kilpatrick vd., 2013; Norris vd., 2003; Olaya vd., 2015).

1.2 Travmatik Bir Deneyim Olarak Terörizm

Terör eylemleri, insan eliyle ve kasıtlı olarak gerçekleştirilen ve toplumu etkileyen travmatik olaylardır (Fullerton vd., 2003). Terörün yasal tanımı ülkeden ülkeye değişmekle birlikte, en temel anlamıyla terör "politik bir amaç uğruna şiddet kullanmak ya da şiddet kullanmakla tehdit etmek" olarak tanımlanabilir (Horgan, 2005, sf. 1). Terör eylemleri, verdikleri fiziksel zararın çok ötesinde toplumun psikolojisini zedelemeyi ve korku, dehşet, endişe, kontrol edilemezlik ve belirsizlik hisleri uyandırmayı hedeflemektedir (Butler vd., 2003). Bu durum göz önüne alındığında, toplumun terör olaylarına medya üzerinden maruz kalarak benzer etkileri yaşamaları, kendileri ya da sevdikleri kişilerin yaşamına yönelik bir tehdit algılamaları da oldukça olasıdır. Bu sebeple, her ne kadar psikiyatrik tanılama sisteminde (DSM-5; APA, 2013) medya aracılığı ile maruz kalma –iş ile alakalı olmadığı sürece- travmatik olay olarak kabul görmese de, teröre medya aracılığı ile maruz kalma bir çeşit dolaylı travma olarak görülmektedir (May & Wisco, 2016).

1.3 Türkiye'de Terörizm

Küresel Terörizm Veri Tabanı (Global Terrorism Database; START, 2018) raporuna göre, Türkiye'de sivilleri hedef alan terör eylemleri 2015 – 2017 yılları arasındaki süreçte tüm zamanlarının en yüksek noktasına ulaşmıştır. Bu süreçte, İstanbul ve Ankara gibi büyükşehirler dâhil olmak üzere, ülkenin pek çok yerinde bombalı saldırılar gerçekleşmiş ve yüzlerce kişi hayatını kaybetmiş, binlercesi de yaralanmıştır. Bu saldırılar, miting alanları, otobüs durağı, sokak düğünü, havalimanı, stadyum çıkışı gibi kalabalık ve insanların günlük yaşamının parçası olan yerlerde gerçekleştirilmiştir. Bu çalışma, Türkiye'de böyle bir ortamın ardından, bu olayların etkisini anlama çabasıyla yürütülmüştür.

1.4 Terör Saldırılarına Maruz Kalmanın Psikolojik Sonuçları

Terör saldırılarına maruz kalan kişilerde diğer travmatik olaylarda da olduğu gibi psikolojik esneklikten kronik psikopatolojilere farklı sonuçlar görülmektedir (Bleich

vd., 2003; Bonanno vd., 2006; Galea vd., 2002; Hall vd., 2009; Miguel-Tobal vd., 2006; Kessler vd., 1995; North vd., 1999; Cieslak vd., 2009). Travmatik bir deneyimin ardından bazı kişiler hafif düzeyde sıkıntılar (uyku problemi, iştah kaybı vb.) yaşasalar da işlevselliklerini dengede tutabilmektedir. Bazı kişiler ise değişen şiddette psikolojik sıkıntılar yaşamaya devam edebilmektedir. Öte yandan, travmatik deneyimlerle mücadele etmek kişilerde bazı olumlu psikolojik değişimlere ve dönüşümlere yol açabilmektedir. Bu çalışmada, teröre verilen psikolojik tepkiler herhangi bir psikopatoloji tanısı bağlamında değil, TSS belirtileri ve TSG açısından ele alınacaktır.

1.4.1 Travma Sonrası Stres (TSS)

Travmatik bir olayın ardından pek çok kişi farklı şiddette ve sürelerde seyreden bilişsel, duygusal, davranışsal ve fiziksel belirtiler gösterebilmektedir. Travma sonrası stres belirtileri, olayla ilgili rüyalar görme, flashbackler ve girici düşünceler gibi 'yeniden yaşama' belirtileri; olayı hatırlatan durumlardan ve insanlardan uzaklaşma, donuklaşma ve hissizleşme gibi 'kaçınma' belirtileri; huzursuz/öfkeli hissetme, dikkat ve odağı toplamada güçlük gibi 'aşırı uyarılmışlık' belirtilerinden oluşmaktadır (Briere & Scott, 2015). Genelde bu belirtilerin şiddeti olayın ardından kısa bir süre içinde azalma eğiliminde olsa da, bazı kişiler bu belirtileri daha uzun süre ve daha şiddetli bir şekilde yaşayabilmektedir (Fullerton vd., 2003). Farklı meta-analiz çalışmalarına göre, terör olayı yaşamış toplumlarda genel popülasyonda terör ilişkili TSSB görülme oranları %9,4 ile %10,9 arasında değişmektedir (DiMaggio & Galea, 2006; Bleich vd., 2003). Bazı çalışmalar, çoğu kişinin, TSSB geliştirmese bile, azımsanmayacak düzeyde TSS belirtileri yaşadığını göstermiştir (Bleich vd., 2003; 2006; Shalev vd., 2006; Schuster vd., 2001).

1.4.2 Travma Sonrası Gelişim (TSG)

Travmatik yaşantıların olumsuz etkilerinin yanı sıra, kişilerin bu yaşantılarla başa çıkma çabaları sonucunda bazı olumlu değişiklikler de görülebilmektedir (Tedeschi & Calhoun, 1995; Linley & Joseph, 2004; Schaefer & Moss, 1992). Travmatik olayın sismik bir olay gibi kişilerin temel varsayımlarını ve şemalarını sarstığı ve travma sonrası sürecin bu olayın anlamlandırılma çabasını ve mevcut varsayımların gözden geçirilmesini kapsadığı belirtilmiştir (Tedeschi & Calhoun, 1995). Bu sürecin sonucunda kişilerin travma sonrası gelişim olarak adlandırılan bazı olumlu değişimler

yaşayabildikleri görülmüştür. Bu değişimler, kişinin benlik algısı, kişilerarası ilişkileri ve yaşam felsefesi gibi alanlarda ortaya çıkabilmektedir (Calhoun & Tedeschi, 2006). Pek çok çalışmada da, terör olaylarının ardından kişilerin TSG ifade ettikleri gösterilmiştir (Blix vd., 2015; Butler vd., 2005; Fredrickson vd., 2003; McCormack & McKellar, 2015; Park vd., 2008).

1.5 TSS ve TSG ile İlişkili Faktörler

Travma literatürü, travmatik olay sonrası verilen tepkiyi sadece olayı yaşamış olmanın değil, başka pek çok faktörün belirlediğini ortaya koymuştur. Bu faktörler genellikle olay öncesi, olaya ilişkin ve olay sonrası olarak gruplandırılmaktadır.

1.5.1 Olay Öncesi Faktörler

Pek çok çalışmada tutarlı olarak gösterildiği üzere, kadın olmak terör olaylarının ya da diğer travmatik yaşantıların ardından geliştirilen TSS/TSSB geliştirme riskini yordayan faktörlerdendir (Bowler vd., 2012; DiGrande vd., 2010; Eşsizoğlu vd., 2017; Karanci vd., 1999; 2012; Schlenger vd., 2002; Tolin & Foa, 2006). Yaş ve TSS/TSSB ilişkisini inceleyen araştırma bulguları ise birbiriyle çelişmektedir. Bazı çalışmalar travmatik olaya daha genç yaşta maruz kalmanın TSS/TSSB için bir risk faktörü olduğunu bulurken (Brewin vd., 2000; Karanci vd., 2012; Schlenger vd., 2002), bazı çalışmalar da orta yaşta olmanın (DiGrande vd., 2008) ya da daha yaşlı olmanın (Verger vd., 2004) artan TSS/TSSB riski ile ilişkili olduğunu bulmuştur. Genel travma literatüründe, TSS/TSSB geliştirme riski ile ilişkili olduğu bulunan diğer sosyodemografik faktörler ise düşük eğitim düzeyi, düşük sosyoekonomik düzey ve düşük gelire sahip olmak olarak bulunmuştur (APA, 2013; Brewin vd., 2000, Karanci vd., 2012). Benzer şekilde, düşük sosyoekonomik düzeye sahip (Boscarino vd., 2003; DiGrande vd., 2008; Rubin vd., 2005), daha eğitimsiz (Bleich vd., 2006; Boscarino vd., 2003; DiGrande vd., 2008; Hobfoll vd., 2008), işsiz (Njenga vd., 2004; Verger vd., 2004), ve bekâr/boşanmış/dul (DiGrande vd., 2008; Galea vd., 2003; Silver vd., 2002) olan kişilerde terör olaylarının ardından TSS/TSSB geliştirme riskinin daha yüksek olduğu bulunmuştur. Sosyodemografik faktörlere ek olarak, psikiyatrik rahatsızlık geçmişine sahip olmak ve geçmişte travma yaşamış olmak TSS/TSSB riskini ve/veya şiddetini arttıran diğer olay öncesi faktörlerdendir (Ahern, 2004;

Brewin vd., 2000; DiGangi vd., 2013; DiMaggio & Galea, 2006; Galea vd., 2003; Karanci vd., 2012; North vd., 1999; Ozer vd., 2008).

TSS çalışmalarına kıyasla daha kısıtlı olsa da, TSG çalışmaları da bazı olay öncesi faktörlerin travma sonrası gelişimi kolaylaştırıcı rolü olduğunu ortaya çıkarmıştır. Cinsiyet ile TSG ilişkisini inceleyen çalışmalar genelde, kadınların daha yüksek TSG düzeyi bildirme eğiliminde olduğunu bulmuştur (Butler vd., 2005; Feder vd., 2008; Helgeson vd., 2006; Kesimci vd., 2005; Rimé vd., 2010; Val & Linley, 2006; Vishnevsky vd., 2010). Yaş ile ilgili olarak, bazı çalışmalar genç yaşta olanların daha çok TSG yaşadığını gösterirken (Butler vd., 2005; Helgeson vd., 2006; Linley & Joseph, 2004; Karanci vd., 2012; Gül & Karanci, 2017), bazı çalışmalar da TSG düzeyinin yaş ile arttığını bulmuşlardır (Vishnevsky vd., 2010). Yüksek gelir ve eğitim düzeyi de yine travma sonrası olumlu değişimlerin görülme olasılığını arttıran faktörler olarak bulunmuştur (Hall vd., 2009; Karanci vd., 2012).

1.5.2 Olaya İlişkin Faktörler

Travmatik olaya ne derece maruz kalındığının TSS/TSSB gelişimi ve şiddeti ile ilişki olduğu pek çok araştırma sonucu ile ortaya koyulmuştur (Brewin vd., 2000; Johansen vd., 2007; Norris vd., 2002; Sungur & Kaya, 2001; Başoğlu vd., 2004). Toplumu etkileyen travmatik olaylarda, olaya direkt maruz kalan kişilerin en yüksek TSSB riski taşıdıkları, genel popülasyonun ise en düşük riski taşıdıkları belirtilmiştir (Neria vd., 2007). Buna benzer şekilde, terör olaylarının ardından yapılan çalışmalar da terör olaylarına daha yüksek düzeyde maruz kalan kişilerde TSS/TSSB yaygınlığının ve belirtilerin şiddetinin daha yüksek olduğunu göstermiştir (Galea vd., 2002; North vd., 1999; North vd., 2011; Gabriel vd., 2007; DiGrande vd., 2010; Silver vd., 2002; Schlenger vd., 2002; Smith vd., 1999). Terör olaylarına direkt maruz kalan kişiler daha yüksek risk taşısa da (Neria vd., 2007; DiMaggio & Galea, 2006; Garcia-Vera vd., 2016; Gidron, 2002), teröre medya da dâhil olmak üzere dolaylı yoldan maruz kalan kişilerde de TSS/TSSB geliştirme riskinin yüksek olduğu pek çok çalışma tarafından ortaya konmuştur (Ahern vd., 2002; Ben-Zur vd., 2012; Schlenger vd., 2002; Shalev vd., 2006). Olayın üzerinden geçen zaman, TSS/TSSB ile ilişkili olan bir diğer faktördür. Bu konudaki çalışma bulgularına göre, olayın üzerinden geçen zaman

arttıkça, TSS/TSSB belirtilerinde azalma eğilimi olduğu görülmektedir (Freh vd., 2013; Silver vd., 2002; Galea vd., 2003; Brackbill vd., 2009).

TSG'yi açıklayan kuramlar, travmatik olaya maruz kalma düzeyinin TSG sürecini etkileyen önemli bir faktör olduğunu öne sürmüşlerdir (Tedeschi & Calhoun; 2004). Kuramsal yaklaşımı destekleyen bir şekilde, yapılan çalışmaların bulguları da travmatik olaya daha yüksek düzeyde maruz kalan kişilerin algılanan TSG düzeylerinin daha yüksek olduğunu göstermiştir (Feder vd., 2008; Helgeson vd., 2006; Laufer & Solomon, 2006; Xu & Liao, 2011; Zoellner vd., 2008). Olayın üzerinden geçen zamanla ilgili olarak ise, bazı araştırma bulguları olayın kısa bir süre sonrasında da TSG yaşanabileceğini gösterse de (Frazier vd., 2001; McMillen vd., 1997), çoğu araştırma bulgusu olayın üzerinden geçen zaman arttıkça TSG'nin de arttığını göstermektedir (Butler vd., 2005; Helgeson vd., 2006; Karanci vd., 2012).

1.5.3 Dünyaya İlişkin Varsayımlar

Daha önce de belirtildiği gibi, pek çok kuramsal yaklaşım travmatik deneyimlerin bireyleri var olan gerçeklikleriyle son derece tutarsız olan sarsıcı yeni bir gerçeklik ile karşı karşıya getirdiğini vurgulamıştır. Bireylerin var olan gerçeklikleri ise "varsayımsal dünya" (Parkes, 1975, s.132) olarak kavramsallaştırılmıştır. Janoff-Bulman'ın Temel Varsayımlar Modeli'ne göre (1992), bireyin varsayımsal dünyasını oluşturan temel inançlar toplamda 8 varsayıma sahip üç ana grup olarak ele alınmaktadır: dünyanın iyiliği varsayımı (dünyanın ve insanların iyiliği), dünyanın anlamlılığı varsayımı (adalet, olayların kontrol edilebilirliği ve rastlantısallık) ve kendilik değeri varsayımı (kendilik değeri, kişisel kontrol ve şans). Bu modele göre, bireyler travmatik olayın ardından var olan, sorgulanmamış inançlarını sorgulamaya başlarlar ve travma sonrası başa çıkma süreci, bu sarsılan varsayımların yeniden yapılandırma sürecidir. Ancak bu yeniden yapılandırma, önceki varsayımlara dönüş anlamına gelmemekte; travmatik yaşantı ile bütünleşmiş yeni bir varsayımsal dünya oluşturma anlamına gelmektedir (Janoff-Bullman, 1985; 1989;1992). Literatür bulguları da, travmatik bir olay yaşamış bireylerin yaşamamış olanlara kıyasla daha olumsuz varsayımlara sahip olduğunu göstermiştir (Chaiguerovaa & Soldatova; 2013; Foa vd., 1999; Magwaza, 1999; Matthews & Marwit, 2004; Walker vd., 2011).

Dünyaya ilişkin varsayımlar ile TSS/TSSB ilişkisini inceleyen araştırmalar, daha olumsuz varsayımların daha fazla TSS/TSSB ile ilişkili olduğunu göstermiştir (Dekel vd., 2004; 2010; Ginzburg, 2004; Freh vd., 2013; Nygaard & Heir, 2012; Solomon vd., 1997; Yuan vd., 2011). Dünyaya ilişkin varsayımların TSG ile ilişkisini inceleyen çalışmalar ise birbiriyle çelişen sonuçlar ortaya koymuştur. Bazı çalışmalar daha olumlu varsayımların yüksek düzeyde TSG ile ilişkili olduğunu bulurken (Bayer vd., 2007; Dekel vd., 2010; Engelkemeyer & Marwit, 2008; Valdez & Lilly, 2015), bazı çalışmalar da olumlu varsayımların düşük düzeyde TSG ile ilişkili olduğunu bulmuştur (Lahav vd., 2016). Bazı çalışmalar da, dünyaya ilişkin varsayımların farklı alt boyutlarının TSG ile farklı yönlerde ilişkili olduğunu göstermiştir (Carboon vd., 2005).

1.5.4 Ruminasyon

Ruminasyon, TSS ve TSG ile ilişkili olan bir diğer olay sonrası faktörlerden bir diğeridir. Travma sonrası yeniden yapılandırma süreci, bilişsel yapılandırma olarak tanımlanan ruminasyonlar sayesinde gerçekleşir (Calhoun & Tedeschi, 1998; Cann vd., 2011). Olay ilişkili ruminasyon, istemsiz (intrusif) ve istemli olarak iki gruba ayrılmaktadır (Cann vd., 2011). İki tür ruminasyon da travma sonrası sürecin bir parçası olarak görülmekle birlikte; istemsiz ruminasyon TSS/TSSB ile pozitif yönde ilişkili iken (Chan vd., 2011; Clohessy & Ehlers, 1999; Ehring vd., 2008; Morris & Shakespeare-Finch, 2011; Razik vd., 2013; Taku vd., 2008; Tripplet vd., 2012), istemli ruminasyon da TSG ile pozitif yönde ilişkilidir (Allbaugh vd., 2015; Gangstad vd., 2009; Gül & Karanci, 2017; Stockton vd., 2011; Salsman vd., 2009; Morris & Shakespeare-Finch, 2011).

1.5.5 Baş etme

TSS ve TSG'yi açıklayan kuramsal yaklaşımlar, olay sonrası faktörlerden olan baş etmenin travma sonrası süreci destekleyen ya da sekteye uğratan oldukça kritik bir etmen olduğunu vurgulamışlardır (Ehlers & Clark, 2000; Freedy vd., 1993; Gibbs, 1989; Schaefer & Moos, 1992; Tedeschi & Calhoun, 2004). Baş etme yolları, genelde iki temel kategoriye ayrılır: problem odaklı başa çıkma ve duygu odaklı başa çıkma. Folkman ve Lazarus'a göre (1985), bu iki tür de eş zamanlı kullanılabilmekle birlikte, kişiler durumun değiştirilebilir olduğunu düşündüğünde daha çok problem odaklı baş

etme yollarını, değiştirilemez olduğunu düşündüğüne ise daha çok duygu odaklı baş etme yollarını kullanma eğiliminde olabilmektedir.

Literatür bulgularına göre, duygu odaklı veya kaçınmacı baş etme yollarını daha fazla kullanmak yüksek düzeyde TSS ile ilişkiliyken (Bleich vd., 2003; Gil & Caspi, 2006; Nuttman-Shwartz & Dekel, 2009; Silver vd., 2002Dörfel vd., 2008; Schnider vd., 2007; Schuettler & Boals, 2011), problem odaklı baş etme yollarını daha fazla kullanmak ise daha düşük düzeyde TSS belirtisi ile ilişkilidir (Ahern vd., 2004; Huijts vd., 2012; Jensen vd., 2015; Silver vd., 2002). Baş etme yolları ve TSG ilişkisini inceleyen çalışmalar ise tutarlı bir şekilde aktif ya da problem odaklı baş etmenin yüksek TSG düzeyi ile ilişkili olduğunu bulmuştur (Butler vd., 2005; Dirik & Karanci, 2008; Göral vd., 2006; Gül & Karanci, 2017; Şenol-Durak & Ayvaşık, 2010; Urcuyo vd., 2005; Schuettler & Boals, 2011).

1.6 Çalışmanın Amacı

Bu çalışmanın amacı, Türkiye'de 2015 – 2017 yılları arasında gerçekleşen terör olaylarının olumsuz (TSS) ve olumlu (TSG) psikolojik sonuçları ile ilişkili faktörleri incelemektir. Bu amaçla, bazı olay öncesi, olaya ilişkin ve olay sonrası faktörlerin, katılımcıların TSS ve TSG düzeylerini açıklamadaki yordayıcı rolü incelenmiştir. Bu amaçla, sosyodemografik değişkenler, geçmiş travmatik yaşantı ve psikiyatrik öykü, olay öncesi değişkenler olarak ele alınmıştır. Olaya ilişkin değişkenler olarak ise, teröre maruz kalma düzeyi, teröre medya aracılığı ile maruz kalma düzeyi ve olayın üzerinden geçen zaman incelenmiştir. Son olarak, olay ilişkili ruminasyon, baş etme yolları ve dünyaya ilişkin varsayımlar da olay sonrası değişkenler olarak değerlendirilmiştir.

2. YÖNTEM

2.1 Örneklem

Bu çalışmanın örneklemi Türkiye'de yaşayan 305 yetişkinden oluşmaktadır. Katılımcıların %74,1'i (N = 226) kadın, %25,9'u (N = 79) ise erkektir. Katılımcıların yaşları 18 ile 58 arasında değişmektedir (M = 26.38, SS = 7.12). Katılımcıların çoğu bekâr (N = 224, %73,4), orta gelir düzeyine sahip (N = 182, %59,7) ve üniversite mezunudur (N = 141, %46,2). İş durumu açısından ise, örneklemin %46,2'si (N = 141)

çalışıyor iken, %53,8'si (N = 164) çalışmadığını belirtmiştir. Katılımcıların çoğu, çalışmanın yapıldığı sırada Ankara (N = 175, %57,4) ve İstanbul'da (N = 63, %20,7).

2.2 Veri Toplama Araçları

2.2.1 Sosyodemografik Bilgi Formu

Sosyodemografik Bilgi Formu, katılımcılara dair temel tanımlayıcı bilgilerin toplanması amacıyla oluşturulmuştur. Bu bilgiler, yaş, cinsiyet, medeni durum, yaşanılan şehir, eğitim düzeyi, gelir düzeyi, iş durumu, psikiyatrik öykü, travmatik olay geçmişi gibi bilgileri içermektedir.

2.2.2 Travmatik Yaşantı Listesi

Travmatik Yaşantı Listesi, Foa ve arkadaşları (1997) tarafından Travma Sonrası Stres Tanı Ölçeğinin bir bölümüdür. Ölçeğin tamamı 4 ayrı kısımdan oluşsa da, bu çalışmada kişilerin travmatik yaşantı geçmişlerini belirlemek amacıyla sadece ilk kısım kullanılmıştır. Ölçeğin Türkçe'ye adaptasyonu, Işıklı (2006) tarafından yapılmıştır. Travmatik yaşantı listesi, 12 farklı travmatik olay (doğal afet, kaza, cinsel ya da fiziksel saldırı vb.) ve diğer olaylar şeklinde açık uçlu bir sorudan oluşan 13 madde içermektedir. Katılımcılar, bu liste içerisinden yaşamları boyunca yaşadıkları travmatik olayları seçmektedir.

2.2.3 Dünyaya İlişkin Varsayımlar Ölçeği (WAS)

Bu ölçek, Janoff-Bulman (1989) tarafından, kişilerin travmatik yaşantıların sonrasındaki temel varsayımlarını ölçme amacıyla geliştirilmiştir. Ölçeğin orijinali, 32 maddeden ve 7 faktörden oluşmaktadır. Ölçeğin Türkçe çevirisi Yılmaz (2008) tarafından yapılmıştır. Bu çalışmada Yılmaz (2008) tarafından yapılan çeviri kullanılmış ve mevcut örneklem için yeniden faktör analizi yapılmıştır. Sonuçlara göre, dünyanın iyiliği (α = .84), adalet/olayların kontrol edilebilirliği (α = .79), şans (α = .84), rastlantısallık (α = .76), kişisel dünyanın kontrol edilebilirliği (α = .72) ve kendilik değeri (α = .71) olarak adlandırılan ve toplam varyansın %56,58'ini açıklayan 6 faktör bulunmuştur. Bu ölçekten alınan puanların artması, ilgili kategoride daha olumlu varsayımların olduğu anlamına gelmektedir.

2.2.4 Terör Olaylarına Maruziyet Formu

Terör Olaylarına Maruziyet Formu, katılımcıların terör olaylarına maruziyetleri ile ilişkili özelliklerini (etkilenilen terör olayı sayısı, olayın üzerinden geçen süre, maruziyet türü, medya maruziyeti düzeyi) belirlemek amacıyla oluşturulmuştur. Formun ilk kısmında, sivillerin zarar gördüğü 33 terör olayı listelenmiş, katılımcılara etkilendikleri olayları seçmeleri ve bu olaylar içinden en çok etkilendikleri bir olayı belirtmeleri istenmiştir. Formun ikinci kısmı, bu seçilen terör olayına kişilerin ne şekilde (direkt ya da dolaylı) maruz kaldığını belirlemeyi amaçlayan 8 evet-hayır sorusundan oluşmaktadır. Formun son kısmı ise, kişilerin bu seçtikleri terör olayına hangi medya araçlarıyla (TV, radyo, gazete, sosyal medya ve internet), ne derece maruz kaldıklarını ölçen sorulardan oluşmaktadır.

2.2.5 Olay Etkisi Ölçeği Gözden Geçirilmiş Formu (IES-R)

İlk önce Horowitz ve arkadaşları (1979) tarafından geliştirilen, daha sonra Weiss ve Marmar (1997) tarafından güncellenen Olay Etkisi Ölçeği, kişilerin son 7 gün içerisinde yaşadıkları travma sonrası stres belirtilerini ölçmek için kullanılan bir araçtır. Gözden geçirilmiş hali (Weiss & Marmar, 1997) 3 alt ölçek ve 22 maddeden oluşan ölçeğin Türkçe uyarlaması Çorapçıoğlu ve arkadaşları (2006) tarafından yapılmıştır. Ölçek bu çalışmada, katılımcıların terör olayları sonrasındaki TSS seviyelerini ölçmek amacıyla kullanılmıştır. Mevcut örneklemde tüm ölçeğin iç tutarlılık katsayısı .88 olarak bulunmuştur. Alt ölçeklerin iç tutarlılık katsayıları ise yeniden yaşama için .83, kaçınma için .68, aşırı uyarılmışlık için .78'dir.

2.2.6 Olaya İlişkin Ruminasyon Ölçeği (ERRI)

Olaya İlişkin Ruminasyon Ölçeği, Cann ve arkadaşları (2011) tarafından, stresli bir yaşam olayı sonrasında gelişen ruminatif düşünceleri ölçmek amacıyla geliştirilmiştir. Ölçek istemsiz ruminasyonları ölçen 10 madde ve istemli ruminasyonları ölçen 10 madde olmak üzere toplamda 20 maddelik 2 bölümden oluşmaktadır. Ölçeğin Türkçe uyarlaması Haselden (2014) tarafından yapılmış olup, faktör yapısı orijinali ile aynı bulunmuştur. Bu çalışmada da, terör olayları ile ilişkili ruminasyon düzeylerini ölçmek amacıyla kullanılan bu ölçeğin iç tutarlılık katsayısı oldukça yüksek bulunmuştur (α =

.94). Alt ölçeklerin iç tutarlılık katsayıları ise, istemsiz ruminasyon için .95, istemli ruminasyon için ise .88 olarak bulunmuştur.

2.2.7 Baş Etme Yolları Ölçeği – Türkçe Formu (WCI-T)

Baş Etme Yolları Ölçeği, Folkman ve Lazarus (1980, 1985) tarafından, kişilerin stresli durumlarda nasıl düşünüp davrandıklarını değerlendirmek amacıyla geliştirilmiştir. Orijinal formu 66 maddeden oluşan ölçeği, Siva (1991) Türkçe'ye çevirmiş ve ölçeğe Türk kültürüne özgü inançları kapsayan 8 yeni madde eklemiştir. Bu çalışmada, kişilerin terör olayları ile baş etmede kullandıkları stratejileri belirlemek amacıyla, ölçeğin Kesimci (2003) tarafından kısaltılan 42 maddelik ve 4 faktör çözümlü versiyonu kullanılmıştır. Mevcut örneklemde tüm ölçeğin iç tutarlılık katsayısı .72'dir. Kaderci, sosyal destek arayan/iyimser, problem odaklı ve çaresiz baş etme alt ölçekleri için ise iç tutarlılık katsayıları sırasıyla .77, .65, .77 ve .73 olarak bulunmuştur.

2.2.8 Travma Sonrası Gelişim Ölçeği (PTGI)

Bu ölçek, Tedeschi ve Calhoun (1996) tarafından, kişilerin travmatik yaşam olayları sonrasında algıladıkları olumlu değişimleri ölçmek amacıyla geliştirilmiştir. Ölçek 21 madde ve 5 faktörden oluşmaktadır. Ölçeğin Türkçe çevirisi Dirik (2006) tarafından yapılmıştır. Bu çalışmada, Dirik (2006) tarafından hazırlanan Türkçe form ve Karanci ve arkadaşları (2012) tarafından bulunan 5 faktör çözümü kullanılmıştır. Mevcut örneklemde tüm ölçeğin iç tutarlılığı oldukça yüksektir (α = .93). Alt ölçeklerin iç tutarlılıkları ise, yeni olanakların algılanması alt ölçeği için .83, manevi değişim için .76, kişilerarası ilişkiler için .83, bireysel güçlülük için .78 ve yaşamın kıymetini anlama için .89 olarak bulunmuştur.

2.3 İşlem

Bu çalışmanın yürütülmesi için gerekli etik izinler ODTÜ Uygulamalı Etik Araştırma Merkezi'nden alınmıştır. Veri toplanması için, ölçüm araçları çevrimiçi veri toplama platformu olan qualtrics.com veri tabanına aktarılmıştır. Potansiyel katılımcılar için, sosyal medya ve mail gruplarından çalışmaya katılım çağrısı yapılmıştır. Aydınlatılmış onam formunu okuyup onaylayan katılımcılara, sırasıyla ölçekler verilmiştir. Çalışmanın sonunda da Katılım Sonrası Bilgilendirme Formu sunulmuştur.

Veriler, Şubat-Mart, 2017 tarihleri arasında toplanmıştır. Toplanan veriler SPSS 24 kullanılarak analiz edilmiştir.

3. BULGULAR

Çalışmanın ana hipotezlerini test etmek amacıyla, TSS belirtileri toplam puanı, TSG toplam puanı ve her ikisinin de tüm alt ölçeklerinin ayrı ayrı bağımlı değişken olarak ele alındığı hiyerarşik çoklu regresyon analizleri yapılmıştır. Bağımsız değişkenler olarak, birinci basamakta olay öncesi faktörler (yaş, cinsiyet, iş durumu, eğitim seviyesi, mevcut psikiyatrik tanı durumu, mevcut psikolojik yardım alma durumu, geçmiş travma yaşantısının olup olmadığı), ikinci basamakta olaya ilişkin faktörler (olayın üzerinden geçen zaman, seçilen toplam olay sayısı, en çok etkileyen terör olayına maruziyet türü, en çok etkileyen terör olayına medya aracılığıyla maruziyeti düzeyi), üçüncü basamakta olay sonrası değişkenlerden baş etme yolları (kaderci, çaresiz, problem odaklı ve sosyal destek arama/iyimser) ve ruminasyon (istemli ve istemsiz) ve son olarak dördüncü basamakta da dünyaya ilişkin varsayımlar (dünyanın iyiliği, adalet/kontrol, şans, rastlantısallık, kendilik değeri, kişisel kontrol) regresyon analizine sırasıyla girilmiştir. TSG ve alt ölçekleri için yapılan analizlerde bunlara ek olarak beşinci basamakta TSS alt boyutları da (yeniden yaşama, kaçınma ve aşırı uyarılmışlık) regresyon analizine dâhil edilmiştir.

3.1 TSS ile İlişkili Faktörler

Yapılan hiyerarşik çoklu regresyon analizinin sonuçlarına göre, tüm bağımsız değişkenlerin girildiği son basamakta, yaşlı olmanın, düşük eğitim düzeyinin, yüksek medya maruziyetinin, istemsiz ruminasyonun, dünyanın iyiliğine dair olumsuz varsayımların, dünyanın adil/kontrol edilebilirliğine dair olumlu varsayımların TSS belirtileri toplam puanını yordayan değişkenler olduğu görülmüştür.

TSS alt ölçekleri için yapılan analizlerde ise, analizin son basamağında, yaşlı olmanın, düşük eğitim düzeyinin, yüksek medya maruziyetinin, olaya direkt maruz kalmanın, istemsiz ruminasyonun, dünyanın adil/kontrol edilebilirliğine dair olumlu varsayımların yeniden yaşama belirtilerini yordayan faktörler olduğu bulunmuştur. Yine tüm değişkenler analize dâhil edildiğinde, aşırı uyarılmışlık belirtilerini yordayan faktörler olarak, yaşlı olmanın, düşük eğitim düzeyinin, istemsiz ruminasyonun ve

dünyanın adil/kontrol edilebilirliğine dair olumlu varsayımların etkisi anlamlı bulunmuştur. Son olarak, kaçınma belirtilerinin bağımlı değişken olduğu analizde, tüm bağımsız değişkenler regresyona dâhil edildiğinde, kaçınma belirtilerini yordayan faktörler olarak sadece istemsiz ruminasyonun ve kişisel kontrolün etkisinin anlamlı olduğu görülmüştür.

3.2 TSG ile İlişkili Faktörler

TSG'yi yordayan faktörlerin incelenmesi için yapılan hiyerarşik çoklu regresyon analizinin sonucunda, tüm değişkenler denkleme girildiğinde, geçmişte travmatik olay yaşamış olmanın, istemli ruminasyonun, kaderci baş etmenin ve sosyal destek arama/iyimser baş etmenin, dünyanın adil/kontrol edilebilirliğine dair olumlu varsayımların ve yeniden yaşama belirtilerinin TSG düzeyini yordayan değişkenler olduğu görülmüştür.

TSG'nin yeni olanakların algılanması alt boyutunu yordayan değişkenler, kaderci baş etme, sosyal destek arama/iyimser baş etme, istemli ruminasyon, dünyanın adil/kontrol edilebilir olduğuna dair olumlu varsayımlar ve kaçınma belirtileri olarak bulunmuştur. Manevi değişim alt boyutunu ise, düşük eğitim düzeyi, psikolojik bir yardım almıyor olmak, kaderci baş etme, sosyal destek arama/iyimser baş etme, istemli ruminasyon ve rastlantısallığa dair olumsuz varsayımların yordadığı görülmüştür. Kişilerarası ilişkiler alt boyutunu yordayan değişkenler de çaresiz baş etme, sosyal destek arama/iyimser baş etme, istemli ruminasyon, dünyanın adil/kontrol edilebilirliğine ve şansa dair olumlu varsayımlardır. TSG'nin dördüncü alt boyutu olan kişisel güçlülüğü ise, yaşlı olmanın, psikiyatrik bir tanısı olmanın, olayın üzerinden geçen zamanın az olmasının, kaderci baş etmenin, sosyal destek arama/iyimser baş etmenin, istemli ruminasyonun ve dünyanın adil/kontrol edilebilir olduğuna dair olumlu varsayımların yordadığı görülmüştür. Son olarak, yaşamın kıymetini anlama alt boyutunu yordayan değişkenler olarak yaşlı olmak, geçmişte travmatik olay yaşamış olmak, problem odaklı baş etme, kaderci baş etme, istemli ruminasyon, kendilik değerine dair olumlu varsayımlar ve kaçınma belirtileri bulunmuştur.

4. TARTIŞMA

Bu çalışmada, olay öncesi değişkenlerden yaş ve eğitim düzeyinin TSS belirtileri toplam puanı ve yeniden yaşama ve aşırı uyarılmışlık belirtileri ile ilişkili olduğu bulunmuştur. Literatürdeki pek çok çalışma, daha yaşlı olmanın (DiGrande vd., 2008; Hall vd., 2008) ve daha eğitimsiz olmanın (Brewin vd., 2000; Bleich vd., 2006; Njenga vd., 2004) TSS/TSSB gelişiminde bir risk faktörü olduğunu ortaya koymuştur. Çalışmalar, yaş ile TSS arasındaki pozitif ilişkinin, yaş ile birlikte artan tehdit algısı, bakım verme yükü, alınan ve verilen destek arasındaki dengesizlik gibi sebeplerle açıklanabileceğini öne sürmüştür (Norris vd., 2002; Stevens vd., 2011). TSS ve eğitim düzeyi arasında negatif yönlü ilişki ise kaynak erişiminde veya bilişsel kapasitedeki olası kısıtlılıklar ile açıklanabilmektedir. Olaya ilişkin değişkenlere bakıldığında ise, bu çalışmada terör olayının medya üzerinden daha çok maruz kalan kişilerde TSS belirtileri genel puanının ve yeniden yaşama belirtilerinin daha yüksek olduğu bulunmuştur. Ayrıca, olaya direkt maruz kalan kişilerde de dolaylı maruz kalanlar ya da sadece medya aracılığıyla maruz kalanlara kıyasla daha yüksek düzeyde yeniden yaşama belirtileri görüldüğü bulunmuştur. Bu sonuçlar, önceki literatür bulguları ile tutarlı sonuçlardır (DiGrande vd., 2010; DiMaggio & Galea, 2006; Garcia-Vera vd., 2016; Neria vd., 2007; Pfefferbaum vd., 2014). Terör olaylarına medya aracılığıyla maruz kalma, kişinin kendi veya bir yakınının yaşamına yönelik bir tehdit oluşturması sebebiyle düşük şiddette travma maruziyeti olarak düşünülebilir (Neria & Sullivan, 2011). Ancak, hâlihazırda stres belirtileri yaşayan kişiler mi daha çok medya tüketimine yönelmekte yoksa medyaya yönelen kişiler mi daha çok stres belirtileri yaşamakta henüz net olarak bilinmemektedir. Olay sonrası değişkenlere bakıldığında, TSS belirtilerini ve 3 alt belirti grubunu da yordayan tek değişken istemsiz ruminasyon olmuştur. Bu sonuç, önceki çalışmaların bulguları ile oldukça tutarlıdır (Ehring vd., 2008; Morris & Shakespeare-Finch, 2011; Razik vd., 2013). TSS'yi açıklayan kuramsal yaklaşımların (Cann vd., 2011; Ehlers & Clark, 2000; Tedeschi vd., 1998) da vurguladığı gibi istemsiz ruminasyonlar, bireylerin travmatik olayın yarattığı aşırı stresi azaltmak ve olayı işlemlemek için giriştiği otomatik bir çabanın sonucudur. Ancak istemsiz ruminasyonların yüksek düzeyde olması, yeniden yaşama ve aşırı uyarılmışlık belirtilerini ve kaçınma gibi etkisiz baş etme yollarını tetiklemekte ve olayın başarılı bir şekilde işlemlenmesini engellemektedir. Dünyaya ilişkin

varsayımlarla ilgili olarak ise, dünyanın iyiliğine olan inancın artması daha düşük düzeyde TSS belirtileri ve aşırı uyarılmışlık belirtileri ile ilişkiliyken; adil/kontrol edilebilir bir dünyaya olan inanç arttıkça TSS belirtilerinde ve yeniden yaşama belirtilerinde de artış gözlenmiştir.

Bu çalışmada, TSG ve 5 alt boyutu için yapılan analiz sonuçlarına göre ise, geçmiş travma yaşantısı TSG toplam puanı ile ve kişisel güçlülük ve yaşamın kıymetini anlama alt boyutları ile ilişkili bulunmuştur. Ayrıca, yaş ile kişisel güçlülük ve yaşamın kıymetini anlama alt boyutları pozitif ilişkili iken, düşük eğitim düzeyi ve psikolojik bir yardım almıyor olmak da manevi değişim alt boyutu ile ilişkili bulunmuştur. Geçmişte travmaya maruz kalan kişiler ya da daha yaşlı olan kişiler terörle tetiklenip ve daha yüksek tehdit algılama riski taşısa da, ancak, bu kişiler geçmiş deneyimleri sayesinde travma ile daha etkili başa çıkma yöntemleri geliştirmiş olabilirler. Olaya ilişkin değişkenlerden hiçbiri, analizlerin son adımında, TSG'yi anlamlı olarak yordamamıştır. Sadece olayın üzerinden geçen zamanın daha az olması, manevi değişim boyunda daha yüksek puanlar alınması ile ilişkili bulunmuştur. Bu da kişilerin olayın etkisiyle bir başa çıkma yöntemi olarak, manevi yönlerini harekete geçirdiğini gösterebilir. Olay sonrası değişkenlerden istemli ruminasyon TSG ve tüm alt boyutlarını yordayan bir değişken olmuştur. Önceki çalışma bulguları ile tutarlı olan bu sonuç, aynı zamanda TSG'yi açıklayan kuramların öne sürdüğü gibi travmatik olayın başarılı bir şekilde işlenmesinin ve büyümenin gerçekleşmesinin, olayın ne anlama geldiği üzerine daha kasıtlı bir şekilde düşünmeye bağlı olduğunu da göstermektedir (Cann vd., 2011; Gül & Karanci, 2017; Tedeschi & Calhoun, 2004; Garcia-Vera vd., 2016). Başa çıkma yaklaşımlarından ise, kaderci yaklaşım ve sosyal destek arama/iyimser yaklaşım, TSG genel puanı ve neredeyse tüm alt boyutları ile pozitif yönde ilişkili bulunmuştur. Kişilerarası ilişkiler boyutunda kaderci yaklaşım yerine çaresiz yaklaşım; yaşamın kıymetini anlama boyutunda ise ve sosyal destek arama/iyimser yaklaşım yerine problem odaklı yaklaşım yordayıcı değişkenler olarak bulunmuştur. Baş etme ile ilgili sonuçlara genel olarak bakıldığında, literatür bulguları ile tutarlı olarak (Prati & Pietrantoni, 2009; Bussell & Naus, 2010; Dirik & Karanci, 2008; Göral vd., 2006; Urcuyo vd., 2005), problem odaklı ya da aktif/adaptif baş etme yolları TSG için kolaylaştırıcı faktörler olmuşlardır. Kaderci baş etme gibi duygu odaklı bir yaklaşımın TSG'yi kolaylaştırıcı etkisi başka çalışmalarda da bulunmuştur

ve bazı kültürel sebeplerle açıklanabilmektedir (Butler vd., 2005; Karanci vd., 1999; Kesimci vd., 2005). Kaderci yaklaşım, Türkiye'deki dini inanışları temsil eden maddeler içermektedir. Bu inanışlar, Allah'ın emrettiklerini sorgulamamayı, olanların sadece Allah'ın izni ile olduğunu, Allah'ın onlar için en iyisini bildiğini ve her işte bir hayır olduğunu vurgular. Bu da kişilerin dış bir güce güvenmesini, daha iyimser bakış açısına sahip olmasını ve olayı anlamlandırabilmesini sağlayan bir faktör olabilir. Dünyaya ilişkin varsayımlara bakıldığında ise, bu çalışmada, dünyanın adil olduğuna dair varsayımların TSG genel puanı ile ve yeni olanakların algılanması, kişilerarası ilişkiler, kişisel güçlülük alt boyutları ile pozitif yönde ilişkili olduğu bulunmuştur. Kendilik değeri varsayımı da, kişilerarası ilişkiler ve yaşamın kıymetini anlama alt boyutları ile pozitif yönde ilişkili bulunmuştur. Bu sonuçlar, kuramsal yaklaşımlarla ve önceki çalışmaların bulgularıyla oldukça tutarlıdır (Dekel vd., 2010; Valdez & Lilly, 2015). Son olarak, yeniden yaşama belirtileri TSG'yi; kaçınma belirtileri ise yeni olanakların algılanması ve yaşamın kıymetini anlama alt boyutlarını yordayan değişkenler olmuştur. Bu sonuçlar, travma sonrası stresin büyüme için gerekli bir unsur olduğu varsayımlarıyla ve önceki çalışma bulgularıyla tutarlı sonuçlardır (Helgeson vd., 2006; Park & Fenster, 2004; Shakespeare-Finch & De Dassel, 2009; Xu & Liao, 2011; Zoellner & Maercker, 2006; Joseph & Linley, 2005).

APPENDIX M: TEZ İZİN FORMU/THESIS PERMISSION FORM

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TEZİN TÜRÜ / DEGREE**:** **Yüksek Lisans** / Master ■ **Doktora** / PhD ☐

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