

THE MEDIATING ROLE OF THE POSTTRAUMATIC GROWTH IN THE
RELATIONSHIP BETWEEN POSTTRAUMATIC STRESS AND PROSOCIAL
BEHAVIORAL TENDENCIES

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ABSTRACT

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The aim of the present study was to assess the relation between trauma exposure and prosocial behavior tendencies. One hundred and forty five individuals with trauma history and 58 individuals without any trauma exposure participated in the study. Prosocial behavior tendency mean scores of trauma and non-trauma groups were compared via t-test analysis. Moreover, posttraumatic stress symptom scores were used to measure the ongoing effect of trauma exposure on the participants. The mediating role of posttraumatic growth in the relationship between posttraumatic stress symptoms and prosocial behavior tendencies were examined via mediation analysis. Results indicated that individuals with trauma history showed more prosocial behavior tendencies than individuals without any trauma exposure. In addition, posttraumatic growth had an indirect effect on the relationship between posttraumatic stress symptoms and prosocial behavior tendencies. Also, this indirect effect of posttraumatic growth was sustained even when participant's empathic

tendency scores were controlled. Study findings provide important social and clinical implications.

Keywords: prosocial behavior, trauma, posttraumatic growth, posttraumatic stress.

ÖZ

TRAVMA SONRASI STRES İLE PROSOSYAL DAVRANIŞ EĞİLİMİ ARASINDAKİ İLİŞKİDE TRAVMA SONRASI BÜYÜMENİN ARACI ROLÜ

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Çalışmanın amacı travmatik yaşam olayları ile prososyal (olumlu sosyal) davranış eğilimi arasındaki ilişkiyi incelemektir. Çalışmaya, travmatik yaşam olaylarına maruz kalmış 145 kişi ile travmatik yaşam olayları yaşamamış 58 kişi katılmıştır. Travma yaşayan katılımcıların prososyal davranış eğilimi skorları ile travma yaşamamış katılımcıların skorları t test aracılığı ile karşılaştırılmıştır. Ayrıca, travma sonrası stres semptom skorları yaşadıkları travmanın katılımcılar üzerindeki etkisini ölçmek amacıyla kullanılmıştır. Travma sonrası büyümenin travma sonrası stres ile prososyal davranış eğilimi arasında ki ilişkideki aracı rolü aracı değişken analizi kullanılarak incelenmiştir. Sonuçlar, travma yaşamış kişilerin daha çok prososyal davranış eğilimi gösterdiğini göstermektedir. Bu sonuca ek olarak; travma sonrası büyümenin, travma sonrası stres ile prososyal davranış eğilimi arasında ki ilişkide aracı rol oynadığı bulunmuştur. Ayrıca travma sonrası büyümenin dolaylı etkisinin katılımcıların empati skorları kontrol edildikten sonra da devam ettiği

gözlemlenmiştir. Çalışma bulgularının sosyal ve klinik açıdan önemli olası etkileri mevcuttur.

Anahtar Kelimeler: Prososyal davranış, travma, travma sonrası büyüme, travma sonrası stres

To my family

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LIST OF ABBREVIATIONS

APA	American Psychiatric Association
DSM	Diagnostic and Statistical Manual
ETS	Empathic Tendency Scale
PDS	Posttraumatic Stress Diagnostic Scale
PTG	Posttraumatic Growth
PTSD	Posttraumatic Stress Disorder
PTGI	Post Traumatic Growth Inventory
PTM	Prosocial Tendencies Measure

CHAPTER 1

INTRODUCTION

There has been a common view that prosocial behavior arises from positive life experiences and socially inappropriate behaviors such as violent behaviors arise from negative life experiences. Yet, emerging perspectives in clinical psychology and social psychology literature lead to alternative views (Vollhardt, 2009). Literature findings have suggested that individuals who suffer from negative life experiences may also engage in prosocial acts.

Staub and Volhardt (2008) argued that people who had traumatic life events might experience healing and some psychological changes. By agency of these changes, they might show more prosocial behaviors as compared to pre-trauma. Posttraumatic growth was mentioned by Vollhardt (2009) among factors that might lead individuals to act in a prosocial way. However, there have been only a few studies that specifically investigated this proposed relationship between traumatic life experience and prosocial behavior. The aim of the present study was to examine the relation between trauma exposure and prosocial behavior. Posttraumatic stress symptom severity was used to operationalize the ongoing effect of trauma exposure on the person who was exposed to the trauma. More specifically, after controlling the effect of empathy, the role of posttraumatic growth on the proposed relationship between posttraumatic stress symptom severity and prosocial behavior was examined.

In the first section, literature regarding prosocial behavior, trauma, trauma-related stress, posttraumatic growth, and empathy will be reviewed. In addition, relations among these variables will be reviewed. Finally, the hypotheses of the present study will be listed.

1.1. Prosocial Behavior

Prosocial behavior refers to a large class of voluntary behaviors that are intended to benefit another person or persons (Eisenberg & Fabes, 1998). It can be spontaneous behaviors, such as helping someone in need, or can be long term,

planned behaviors, such as volunteering at an organization. There are different kinds of behaviors that individuals can exhibit in a prosocial way such as sharing, helping, and comforting (Brownell, Svetlova, & Nichols, 2009; Zahn-Waxler, RadkeYarrow, Wagner, & Chapman, 1992).

Different approaches were presented to explain why people show prosocial behavior. Approaches based on learning mechanisms specifically emphasized the effect of developmental factors and socialization processes on prosocial behavior (Bierhoff, 2002, Penner, Dovidio, Piliavin, & Schroeder, 2005). Prosocial acts were explained by mechanisms such as reinforcement and modeling (Bierhoff, 2002). Previous research has supported the effect of modeling (Coates, Pusser, & Goodman, 1976; Friedrich & Stein, 1973) and positive reinforcement (Rushton & Teachman, 1978) on children's prosocial behavior.

Approaches based on arousal and affect emphasized the role of emotions in explaining prosocial behavior (Penner et al., 2005). Empathy-altruism hypothesis explained prosocial behavior in terms of altruistic motivations. According to this approach, if a bystander witnesses another person in need, the bystander may take individual's perspective. In turn, if the person experiences empathy, she/he will be more likely to show altruistic behavior with ultimate intention to benefit the other person (Batson, Duncan, Ackerman, Buckley, & Birch, 1981). Batson (2002) stated that empathic concerns, such as compassion and sympathy, lead individuals to act in a prosocial way. In contrast, Cialdini, Schaller, Houlihan, and Arps (1987) proposed that if people feel sadness, guilt, or personal distress when they encounter a person in need, they can show prosocial act with a selfish motivation to relieve such negative emotions. Batson (2002) also stated that people can gain personal benefits when they show altruistic behaviors. That is, Batson (2002) did not exclude internal rewards (e.g., decreased personal stress) and external rewards (e.g., social reward), so far as the ultimate goal of behavior was benefiting others. Correspondingly, previous findings have supported the positive relationship between empathic arousal and helping behavior (Batson, Eklund, Chermok, Hoyt, & Ortiz, 2007).

Approaches based on social and personal standards perspective focused on the way norms can lead people to show prosocial acts so as to have positive self-image (Schwartz & Howard, 1982 as cited in Penner et al., 2005, p. 368), or fulfill

own personal needs (Omote & Snyder, 1995). Long-term, planned prosocial behavior is mostly explained using this perspective (Penner et al., 2005). As an example, Omoto and Snyder (1995) found that personal development and esteem enhancement motivations are related to the length of working as an AIDS volunteer. They argued that self-oriented motivations rather than other-oriented motivations determine the length of volunteering. In addition, Finkelstein, Penner and Brannick (2005) argued that the volunteers who had a volunteer role identity and who thought that other people expected them to behave according to their volunteer role identity were more likely to maintain volunteering. It seems that norms and personal needs affect the probability of showing prosocial behavior.

Prosocial behavior was also explained with the evolutionary theory. Accordingly, prosocial tendencies are based on genetic predispositions and the evolutionary success of people who displayed such predispositions. Evolutionary success means survival of one's genes in subsequent generations. (Dawkin, 1989 as cited in Penner et al., 2005, p. 369). Mechanisms such as kin selection, reciprocal altruism, and group selection help explain functions of prosocial actions. According to kin selection theory, humans have a tendency to help close relatives because of genetic similarities. Helping a kin will increase the probability of passing one's genes to next generations (Dickerson, 2012). Correspondingly, Burnstein, Crandall and Kitayama (1994) found that in life or death situations, people are more likely help to close kin over distant kin. That is, people helped others in a way that increases the probability of passing one's genes to next generations.

Whereas kin selection theory was proposed to explain prosocial acts towards relatives, the concept of reciprocal altruism was proposed to explain why people help non-relatives. According to this approach, people show prosocial act because prosocial behavior increases the likelihood of receiving help (Dickerson, 2012). Finally, according to group selection theory, altruistic behavior increases evolutionary success of groups. Thus, people tend to help members of their own groups in order to increase the probability of group's survival. Research on group selection theory has recently attracted attention (Penner et al., 2005).

Moreover, some approaches investigate personality factors in explaining prosocial behavior. It has been found that certain personality characteristics are

correlated with prosocial actions. Studies revealed that general personality factors tend to be stable (Caspi et al., 2003) and similarly, prosocial traits are also stable over time (Eisenberg et al., 2002 as cited in Baumeister & Finkel, 2010, p. 278). Based on these findings, Penner, Fritzsche, Craiger and Freifeld (1995) proposed a prosocial personality structure. They stated that prosocial personality consists of such traits as sense of responsibility, other oriented empathy, that is tendency to feel empathy and concern for others, and self-perception that one is a helpful individual (helpfulness). Correspondingly, Penner (2002) found that there was a relationship between helpfulness, other oriented empathy, and volunteer activities.

Researchers have examined situational factors to understand when people are more likely to act in a prosocial way. Bystander effect has been one of the most prominent situational factors that decrease the likelihood of helping others. Darley and Latane (1968) proposed that the diffusion of responsibility in a situation reduces the possibility of helping behavior. They claimed that if there were potential helpers in a situation, people would be less likely to feel responsibility and show helping themselves. Correspondingly, Latane and Darley (1968) showed that participants were less likely to show prosocial behavior when there were passive others. Clark and Word (1974) also showed that the possibility of the prosocial behavior decreased when target's need for help was ambiguous. Moreover, people were more likely to help in an emergency situation (Shotland & Huston, 1979). In summary, situational factors such as the presence of potential helpers, whether the situation involves an emergency, and whether the need for help is clear affect the probability of engaging in prosocial behavior.

Regarding the factors that motivate prosocial behavior, Carlo and Randall (2002) grouped the types of prosocial behaviors into six main categories; namely, altruistic, compliant, emotional, dire, public, and anonymous helping behavior. Altruistic helping, which usually stems from sympathy and internalized principle of helping, is carried out by motivation with the ultimate goal of benefiting others. Whereas compliant prosocial behaviors include helping others when asked, dire prosocial behaviors are behaviors that are conducted under emergency situations. Emotional prosocial behaviors are helping others under emotionally evocative circumstances. Public prosocial behaviors involve helping while others are also

present and are likely to be motivated by a desire to gain the approval and respect of others. Lastly, anonymous prosocial acts involve helping when the receiver of help has no knowledge about helper's identity (Carlo & Randall, 2002).

As mentioned above, there have been different approaches that tried to explain why and when people are more likely show prosocial behavior. Yet, previous studies mostly examined positive factors and processes, such as positive socialization experiences during childhood (Coates et al., 1976; Friedrich & Stein, 1973), personal and social needs such as enhancement of self (Omoto & Snyder, 1995), or empathy as an affective source of helping behavior (Batson, 2002) that lead to prosocial acts. The concept of *altruism born of suffering* (Staub 2003, as cited in Vollhardt, 2009, p. 54), on the other hand, has focused on negative factors and experiences as motivators of prosocial behavior. Vollhardt (2009) suggested that people who experienced traumatic life events could experience changes in psychological processes, and in turn, might show increased prosocial behavior. He proposed that a person who was suffering could experience psychological change, such as identifying meaning in life and experiencing an increase in self-efficacy. A traumatized person could also show increase in empathy and perspective-taking or develop identification with other victims. By agency of these changes, person with trauma history could show increased prosocial behavior. In addition, people with trauma history could engage in prosocial acts to find meaning in their suffering or to cope with their distress (Vollhardt, 2009).

In summary, literature on altruism and prosocial behavior is generally based on positive factors, with the exception of studies that investigated altruism born of suffering. A similar tendency has been observed in trauma studies. Literature on trauma has primarily examined negative consequences of traumatic events, although positive experiences in the aftermath of the trauma have recently attracted attention. In the following paragraphs trauma, trauma-related distress, and trauma-related growth will be examined.

1.2. An Overview of Trauma

The term *trauma* comes from an ancient Greek word meaning *wound* or *pierce* (Tummey & Turner, 2008). It was first used to refer to soldiers who suffered injury due to pierced armors (Spiers & Harrington, 2001 as cited in Tummey &

Turner, 2008). This ancient definition of trauma based on the overwhelmed physical defense has similarities with the current understanding of psychological trauma (Tummey & Turner, 2008). Understanding of trauma that is based on psychological roots has been formed during a historical process (Hermann- 1997). Herman (1997) summarized the historical process in which concept of trauma had changed. He indicated that a specific type of psychological trauma emerged into public awareness over the past decades. Hysteria, shell shock (combat neurosis), and sexual and domestic violence attracted public attention over the last hundred years.

Hysteria was the first type of psychological trauma that appeared as an important research topic during the last century. Jean-Martrin Charcot was the frontier who studied hysteria in the late nineteenth century. He focused on neurological damage (i.e, motor paralyzes, sensory losses, convulsions, and amnesia) as possible causes of hysteria. During the mid-1890s Janet in France, Freud and Breuer in Vienna discussed hysteria in terms of psychological causes. According to them, hysterical symptoms are based on an altered state of consciousness, which developed by emotional reactions to the traumatic events. Yet, the study of hysteria went out of favor due to the social and political inclination of the time (Herman, 1997).

Shell shock or combat neurosis was another type of psychological trauma that was recognized as an important topic during the last century. The reality of psychological trauma attracted attention again because of negative effect of First World War. Charles Myers introduced the term shell shock to define soldiers' experiences that were similar to hysteria. The causes of this syndrome were the emotional stress of warfare. Then, Second World War and Vietnam War resulted in increased attention to the psychological effects of war and treatment of psychological trauma. Some soldiers established an anti-war movement and formed rap groups to provide support for veterans and raise awareness about the effects of war. By the agency of anti-war movements and national exposure to traumatic war experience, PTSD (Post-traumatic Stress Disorder) was introduced as an official diagnosis in the Diagnostic Statistical Manual of Mental Disorders third version (DSM III) in 1980 (Hermann, 1997).

Lastly, psychological trauma drew attention again in the form of sexual and

domestic violence. Emerging feminist movements in the nineteenth-century in the U.S. led to increased attention on domestic violence, rape, and childhood sexual abuse. By the agency of increased attention to women's negative experiences, women's movements in the 1970's became more effective. First public speech about rape was in 1971. Increased attention to women's experience of negative life events made it easier to talk about rape and information about the prevalence rate of sexual abuse became more public. Then, it became clear that psychological effects of rape, incest, and violence on women were similar with the effect of war on men (Hermann (1997). Shortly, in addition to emerging awareness about the effect of war on men, awareness about women's traumatic experience increased.

In summary, it seems that the definition of trauma has gradually shifted from involving physical factors to including psychological effects. Today, the psychological effect of traumatic events on people is the focus of several studies.

1.2.1. Traumatic Life Events

Traumatic events include a large scope of events such as wars, interpersonal violence, natural disasters, serious illnesses, accidents and death of a loved one. However, it is important to distinguish traumatic events from other stressful events. Juhant and Zalec (2012) argued that when people are exposed to traumatic events, their ability to integrate their emotions is overwhelmed and they feel a threat to their life, the life of a loved one, or to their bodily integrity.

In the DSM III, traumatic event was defined as a very stressful event outside the range of usual human experience (American Psychiatric Association, 1980). This definition was criticized for ignoring the way in which an individual makes sense of a traumatic event (Tummey & Turner, 2008). According to DSM-IV-TR (American Psychiatric Association [APA], 2000), traumatic events have two components: (1) experiencing, witnessing, or confronting with actual or threatened death or serious injury, or a threat to the physical integrity of oneself or others; and (2) experiencing intense fear, helplessness or horror (APA, 2000). Some modifications were made in the definition of trauma in DSM 5. A traumatic event (APA, 2013) is defined as an event that involves actual or threatened death, a serious injury, or sexual violation in DSM 5. According to DSM 5, an individual may personally experience or witness these kinds of events, learn that the traumatic event occurred to a close family

member or friend, or may be exposed to repeated or aversive details of the traumatic event. Besides, the peri-traumatic fear, helplessness or horror requirements were eliminated in DSM 5. In the present study, participants' self-report of an event as traumatic was sufficient to be included in the sample.

There have been many findings about the prevalence rate of traumatic events. The lifetime prevalence of exposure to any trauma was 89.6 % in the Detroit, Michigan area (Breslau et al., 1998), 80.8 % in Sweden (Frans, Rimmö, Aberg, & Fredrikson, 2005), 76 % for adults in Mexico (Norris et al., 2003), 80.3 % for young women in Japan (Mizuta et al., 2005), 75 % in South Africa (Williams et al., 2007), and 21.4 % for youths in Munich, Germany (Perkonigg, Kessler, Storz, & Wittchen, 2000). Moreover, Karancı et al. (2012) reported that the lifetime prevalence rate of experiencing at least one traumatic event is 84.2 % for an adult sample in Turkey (Ankara, Kocaeli, and Erzincan). These findings have suggested that the prevalence rate of lifetime exposure to any traumatic events is high.

Even though the lifetime occurrence of any trauma exposure is high, prevalence rates may vary based on the type of trauma experienced. A metaanalysis conducted by Vishnevsky, Cann, Calhoun, Tedeschi, and Demakis (2010) summarized results of 70 studies, including different populations, such as USA, Turkey, and China. This study revealed that most prevalent types of events were cancer, bereavement, terrorism, and natural disasters. Williams et al. (2007) examined the prevalence rate of traumatic events in South Africa and reported that most common traumatic events are death of a significant other, witnessing trauma, criminal victimization, partner violence, and having one's life threatened. Less common traumatic events were child abuse and disasters for this population. Moreover, Karancı et al. (2012) reported that natural disasters and death of a loved one were the most common types of traumatic events for adult samples in Turkey. It seems that the prevalence of each type of traumatic event may show differences in different populations.

In summary, the life time occurrence of traumatic events is quite high. Thus, most people experience a kind of traumatic event during their lifetime. Therefore, possible consequences of traumatic events are important.

1.3. Post-traumatic Stress Symptoms

The effects of traumatic events may vary across individuals. People may experience positive or negative changes after a traumatic event. Some people may experience trauma-related stress in the aftermath of a highly stressful event. The psychological effect of traumatic events has attracted public attention over the last hundred years. Studies about hysteria, negative effect of world wars and increasing awareness about women's exposure to domestic violence and sexual abuse has attracted public attention to the issue of psychological effects of traumatic experience (Herman, 1997).

Posttraumatic stress disorder (PTSD) was first defined in the DSM III. Some modifications were made in DSM IV and DSM 5. According to DSM-IV-TR (APA, 2000), there are three symptom clusters under PTSD diagnostic criteria. These are re-experiencing, avoidance, and hyper arousal. There are 5 symptoms under re-experiencing symptom cluster. These are recurrent and intrusive memories, recurrent dreams about the event, feeling as if the traumatic event was recurring, psychological distress, and physiological reactions. At least 1 of these 5 symptoms should be present for diagnosis. There are 7 symptoms under avoidance symptom cluster. These are avoiding trauma-related thoughts, feelings, and trauma-related external reminders, forgetting an important part of the event, showing less interest in significant activities, feeling detached from others, having restricted range of affect, and sense of foreshortened future. At least 3 of these 7 symptoms should be present for diagnosis. Finally, there are 5 symptoms under arousal criteria. These are sleep disturbance, feelings of irritability and anger, difficulty in concentration, increase in the condition of being vigilant and in startle response. At least 2 of these 5 symptoms should be present for diagnosis. In addition to these criteria, the duration of the disturbances should be more than one month, and the disturbance should result in significant stress and functional impairment in social, occupational or other important areas of functioning.

Three symptom clusters in the DSM-IV has been modified into four symptom clusters in DSM 5. Symptom clusters in DSM 5 are intrusion symptoms (one required), avoidance symptoms (one required), negative alterations in cognitions and mood (two required), and alterations in arousal and reactivity (two required) (APA, 2013). A person who meets the symptom requirements in each of the

symptom clusters can be diagnosed with PTSD. These diagnostic restrictions imposed by the DSM lead some researchers to examine posttraumatic stress symptoms in the absence of PTSD diagnosis. Terms such as partial PTSD (e.g., Stein, Walker, Hazen & Forde, 1997), subsyndromal PTSD (e.g., Bryant & Harvey, 2002), or subthreshold PTSD (e.g., Marshall et al., 2001) are used to refer to non-clinical post-traumatic stress symptoms. Also, some researchers are interested in posttraumatic stress symptomatology (PTSS) only to assess total scores of symptoms of avoidance, hyperarousal, and re-experiencing (e.g., Muller, Sicoli & Lemieux, 2000). The way PTSD is defined also affects the prevalence rate of PTSD.

Stein et al. (1997) defined partial PTSD as having at least one symptom in each symptom clusters category and found that 3.4 % of women and 0.3 % of men are diagnosed with partial PTSD among 1002 people in Canada. Also, 2.7 % of women and 1.2 % of men were diagnosed with full PTSD. In another study, Amir and Ramati (2002) defined partial PTSD as meeting the diagnostic criteria for 2 out of 3 symptom clusters in DSM-IV. They found that among 39 breast cancer survivors, 18% meet the criteria for full PTSD and 56 % met criteria for partial PTSD. Besides, Marshall et al. (2001) showed that 9 % of participants met the full criteria for PTSD. Moreover, 18.9 % of the participants without PTSD diagnosis reported at least one PTSD symptom lasting at least one month after a traumatic event.

The prevalence rate of posttraumatic stress symptoms also vary based on demographic variables such as gender, mental health status, and socioeconomic status (SES). It has been shown that although men report more lifetime trauma exposure (Amir & Sol, 1999; Darves-Bornoz et al., 2008; Frans, Rimmo, Berg & Fredrikson, 2005; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Norris, 1992; Perkonigg et al, 2000), women report more PTSD symptoms (Amir & Sol, 1999; Darves-Bornoz et al., 2008; Frans et al., 2005; Hapke, Schumann, Rumpf, John, & Meyer, 2006; Kessler et al., 1995; Perkonigg et al., 2000; Kessler et al., 1995). Kessler et al. (1995) proposed that gender difference could be related with kinds of trauma experienced. They indicated that the probability of PTSD varied according to the nature of the traumatic event. They showed that men who experienced combat, childhood neglect, and childhood physical abuse, and women who experienced

sexual molestation, physical attack, and threat by a weapon, and childhood physical abuse were more likely to develop PTSD. In addition, they showed that women were more likely to experience the kinds of trauma that result in PTSD. They discussed that more women showed PTSD symptoms than men, because women experienced traumatic events that were more likely to result in PTSD. Frans et al. (2005), however, found that controlling for the trauma type did not account for gender differences in PTSD rates and they argued that women might be more vulnerable to stress.

Probability of developing PTSD symptoms is also affected by trauma related factors. Previous findings showed that life threat during trauma (Kilpatrick et al., 1989; Ozer, Best, Lipsey, & Weis, 2003) physical injury (Kilpatrick et al., 1989), and peritraumatic dissociation (Breh & Seidler, 2007; Ozer et al., 2003) were positively associated with developing posttraumatic stress response.

Furthermore, trauma type has an effect on the probability of developing PTSD symptoms. It has been suggested that sexual assault is more likely to result in PTSD compared to other types of traumatic events (Amir & Sol, 1999; Kessler et al., 1995; Middleton & Craig, 2012). Besides, Breslau et al. (1998) showed that experiencing human-made trauma such as rape, torture, and violence is more likely to result in PTSD compared to unintentional violence or learning about traumatic events experienced by others.

Moreover, the number of the lifetime trauma exposure has been studied in PTSD literature. Prior traumatic life experience increased the probability of PTSD (Bremner, Southwick, Jonhson, Yehuda, & Charney, 1993; Ozer et al., 2003). Similarly, according to the results of a 30-year longitudinal study (Mulder, Fergusson, & Horwood, 2013), in addition to the strong association between the severity of PTSD symptoms and the number of lifetime trauma exposures, there was also a strong linear relationship between PTSD symptom severity and significant negative life events, such as being robbed (without physical confrontation), a major relationship break-up, and major financial problems.

Finally, the effect of time elapsed since the traumatic event has been investigated. Research findings have suggested that PTSD symptoms decline as time passes (Mayou, Ehlers, & Bryant, 2002; Rothbaum, Foa, Riggs, Murdock, & Walsh,

1992). Yet, Amir, Kaplan, and Kotler (1996) found that there was an increase in PTSD symptoms among individuals who experienced various types of trauma as time elapsed since the trauma. They argued that positive correlation between time elapsed since the trauma and PTSD symptoms might be an artifact of the sample. They proposed that participants with war history experienced their trauma several years earlier and their PTSD symptoms increased as time elapsed since trauma and seemed chronic. This sample characteristic might lead to significant positive correlation between PTSD symptoms and time since the trauma.

It seems that the probability of developing PTSD symptoms is affected by demographic variables and trauma related factors. It is important to point out that people do not always develop trauma related stress, but they may even show trauma-related positive change.

1.4. Posttraumatic Growth

Research on trauma has mostly focused on negative psychological effects of traumatic events such as depression, anxiety, or posttraumatic stress disorder (Kaltman, Green, Mete, Shara, & Miranda, 2010; O'Donnell, Creamer, & Pattison, 2004). Yet, people may also experience positive changes after highly stressful life events (Bozo, Gündoğdu, & Büyükaşık-Çolak, 2009; Calhoun & Tedeschi, 1999; Dirik & Karancı, 2008; Frazier et al, 2012; Helgeson, Reynolds, & Tomich, 2006; Karancı et al, 2012; Tedeschi & Calhoun, 2004; Vollhardt & Staub, 2011). Obtaining positive changes as a result of dealing with stressful life events is called Posttraumatic Growth (PTG; Calhoun & Tedeschi, 1999; Tedeschi & Calhoun, 2004). Other terms for PTG are adversarial growth (Linley & Joseph, 2004), benefit finding (Affleck & Tennen, 1996), stress-related growth (Park, Cohen, & Murch, 1996), and positive psychological change (Yalom & Lieberman, 1991). Posttraumatic growth is not only recovery from trauma, but also involves further development. That is, PTG causes improvement in an individual's psychological capacities compared to pre-trauma (Janoff-Bulman, 2004; Zoellner & Maercker, 2006).

Tedeschi, Park, and Calhoun (1998) suggested that growth outcomes can be seen in different parts of the individual's life. The positive changes can occur in the perception of self, relationship with others, and view about life (Tedeschi et al., 1998; Tedeschi & Calhoun, 2004; Zoellner & Maercker, 2006).

Positive change can occur in the perception of self. People who show PTG tend to experience change in self perception, such as increase in self reliance or self efficacy (Tedeschi et al., 1998). Correspondingly, Abraído-Lanza, Guier, and Colón (1998) showed that increased personal strength as a positive growth outcome was observed among participants with chronic illness. Also, people may start to perceive themselves as a survivor of trauma rather than a victim of trauma (Tedeschi et al., 1998). In addition to increased personal strength, people who develop PTG may show increased awareness about their own vulnerability and mortality. When awareness about vulnerability is combined with sense of personal strength, this situation may lead people to seek more social support that may cause closer relationships with others (Tedeschi et al., 1998).

Another type of growth outcome can be observed in interpersonal relationships. People in the aftermath of the trauma may develop more intimate relationships with others. They may show increase in self-disclosure and emotional self-expression (Tedeschi et al., 1998). Furthermore, awareness about their own vulnerability may lead people to experience more empathy, compassion, and to show more helping behavior (Tedeschi et al., 1998). Correspondingly, Schwartzberg (1994) stated that showing altruistic behavior was among the benefits of experiencing stressful events among HIV-infected gay men.

As another growth outcome, people may also experience positive changes in their philosophy of life. Traumatic events may lead people to think of the rest of their lives as a second chance. Consequently, they may have greater appreciation for life (Tedeschi et al., 1998). As an example, Cordova, Cunningham, Carlson, and Andrykowski (2001) found that breast cancer survivors showed greater appreciation of life when compared to healthy comparison participants. People in the aftermath of the trauma may also develop existential questions and try to find the meaning of life (Tedeschi et al., 1998). A study showed that 57 % of parents found meaning 60 months after an adolescent's or young adult child's death (Murphy & Johnson, 2003). Furthermore, some people may experience spiritual development, such as increase in the sense of presence of God and religious commitment (Tedeschi et al., 1998). People may also develop wisdom especially if they experience greater appreciation of life, closer relationships, and increased spirituality (Tedeschi et al., 1998).

The prevalence rates of experiencing positive changes among breast cancer patients were between 63 % and 84 % (Collins, Taylor, & Skokan, 1990). Tsai, Sippel, Mota, Southwick, and Pietrzak (2015) examined PTG over a 2-year period among U.S. military veterans. They found that 59.4 % of U.S. veterans, who reported at least moderate PTG in relation to their worst traumatic event at an initial assessment, maintained that level of PTG two years later.

Demographic variables such as gender, age, and income may influence the probability of experiencing trauma-related growth. Researchers found that being female (Lencher et al., 2003; Park et al., 1996; Polatinsky & Esprey, 2000) and having higher income (Cordova et al., 2001) were positively related to posttraumatic growth outcomes. Lencher et al. (2003), on the other hand, found no association between PTG scores and gender or income among cancer patients. They explained that their results were inconsistent with literature but did not propose any explanation for these results.

The probability of experiencing posttraumatic growth has been affected by trauma related factors such as the type of trauma, stressfulness of the event, and time elapsed since the traumatic event. PTG has been observed in different types of traumatic events such as breast cancer (Bozo, Gündoğdu, & Büyükaşık-Çolak, 2009; Cordova et al., 2001; Karancı & Erkam, 2007), accident, assault (Snape, 1997, Karancı et al., 2012), sexual abuse (Frazier, Conlon, & Glaser, 2001; McMillen, Zuravin, & Rideout, 1995), HIV/AIDS (Siegel & Schrimshaw, 2000), natural disaster, and the death of a loved one (Karancı et al., 2012). Researchers have compared PTG scores in different types of traumatic events. Shakespeare-Finch and Armstrong (2010) showed that bereaved individuals reported more PTG scores when compared to participants with sexual assault or motor vehicle accident history. Others could not find any difference between the types of traumatic events (Milam, Ritt-Olson & Unger, 2004; Park et al., 1996). Tedeschi and Calhoun (2004) observed that struggle in the aftermath of the trauma, not the trauma itself, produces PTG. So, stress caused by the event rather than the type of event could be more influential. Correspondingly, Park et al. (1996) found that there is a positive correlation between the event's stressfulness at the time of occurrence and stress-related growth scores. Moreover, Cordova et al. (2001) stated that perceived life threat was positively

correlated with PTG scores among breast cancer survivors. It seems that severity related factors rather than event types play a role in showing PTG.

The effect of time on the development of PTG has also been investigated. Several studies found positive relationship between the time elapsed since traumatic event and PTG scores (Cordova et al., 2001; Polatinsky & Esprey, 2000). Yet, some researchers could not find a relationship between time elapsed since the traumatic event and PTG (Lechner et al., 2003). Linley and Joseph (2004) argued that longitudinal studies rather than cross sectional studies could be more informative to investigate the effect of time. A six month longitudinal study revealed that PTG scores were the highest at the time of cancer diagnosis, except for the appreciation of life domain of PTG, and the authors argued that posttraumatic growth occurred primarily at the time of cancer diagnosis and was a stable construct once it occurred (Steel, Gamblin, & Carr, 2008). Another longitudinal study conducted by Frazier and colleagues (2001) showed that sexual assault survivors reported more positive changes within 2 weeks to 2 months period after the trauma compared to 6 to 12 months period, and the increase in positive changes was minimal after 6 months.

1.4.1. Relationship between Posttraumatic Stress Symptoms and Posttraumatic Growth

Previous studies have reported both negative and positive relation between posttraumatic growth (PTG) and posttraumatic stress disorder (PTSD). Cadell, Regehr and Hemsworth (2003) found a significant positive direct effect of experiencing traumatic stress and depression on growth outcomes among bereaved HIV/AIDS caregivers. Correspondingly, a meta-analytic review of 87 studies concluded that trauma-related growth is related to greater severity of intrusive and avoidant posttraumatic symptoms (Helgeson et al., 2006). In contrast, a meta-analysis of 38 studies revealed a negative relationship between PTG and PTSD symptoms among participants with cancer or HIV/AIDS (Sawyer, Ayers, & Field, 2010).

Zoellner and Maercker (2006) stated that the inconsistencies regarding the relation between PTG and PTSD symptoms could be due to using different measures and methods in the studies. They indicated that non-significant relation between PTG and PTSD was observed in cross-sectional studies. If PTG was assessed via

standardized scales, such as PTGI, a positive association or no association with PTSD was observed. On the other hand, when PTG was assessed using interview format, negative association between PTG and PTSD was reported.

Joseph and Linley (2006) also discussed the relationship between PTG and PTSD. They proposed that three symptoms of PTSD (i.e; re-experiencing, avoidance, and arousal) could be considered as a search for the meaning of life following traumatic events. They argued that the traumatic event destroyed assumptions about the self and the world, so people needed to reconstruct their assumptions. If individuals could rebuild their pre-trauma assumptions through exploring new meanings, psychological distress would decrease.

The positive relationship between PTG scores and PTSD symptoms implies that trauma related stress can be more than an index of stress. It can also reflect current cognitive processing of the traumatic event (Horowitz, 1991, as cited in Park et al., 1996, p. 98). Based on this perspective, posttraumatic stress scores were used to operationalize the continuing effect of the event and individual's processing of the event in this study.

It seems that trauma exposure can lead to the development of both posttraumatic stress and posttraumatic growth (Helgeson et al., 2006). Moreover, literature findings recently suggested that prosocial behavior could be related with trauma exposure (Frazier et al., 2012). The other variable that has mostly been examined in relation to prosocial behavior is empathy (Eisenberg & Eggum, 2010).

1.5. Empathy

There has been an ongoing debate on the nature of empathy (Duan & Hill, 1996; Eisenberg & Miller, 1987). Some theorists conceptualized empathy as an affective concept, whereas others conceptualized it cognitively (Bierhoff, 2002). According to the cognitive definition, empathy is an ability to apprehend the affective or cognitive status of another (Hogan, 1969). According to the affective definition, empathy is a person's vicarious matching of another's affective state (Stotland, 1969). There are research studies investigating both the cognitive and the affective aspects of empathy (Jolliffe & Farrington, 2004). Cohen and Strayer combined both the affective and cognitive aspects of empathy and defined it as “the ability to understand and share in another’s emotional state or context” (1996, p.

988) Moreover, Dökmen (1988) discussed empathy in two dimensions, involving empathic tendency and empathic ability. While empathic tendency was defined as a person's potential to show empathy in daily life, empathic ability was defined as a person's ability to show empathy to other person.

In addition to various definitions of empathy, there are various ways of conceptualizing and measuring empathy. Three different constructs have been used to refer to empathy (Duan & Hill, 1996). Some researchers discussed empathy as a personality trait (Hogan, 1969). Those who conceptualize empathy as a trait study individual differences across this trait and the development of this trait during childhood (Duan & Hill, 1996). Yet, other researchers conceptualized empathy as a situation specific cognitive-affective state (e.g., Barrett-Lennard, 1962). Conceptualizing empathy based on situation specific factors lead researchers to study the effects of situational factors, intraindividual differences in empathy (Duan & Hill, 1996), and to manipulate empathy levels (e.g., Regan & Totten, 1975). Finally, researchers who are interested in the way empathy is experienced in psychotherapy discussed empathy as a multistage experiential process (e.g., Rogers, 1975). Studies based on the multistage perspective are mostly descriptive (Duan & Hill, 1996).

Empathy has also been discussed in relation to prosocial and antisocial behaviors in social psychology literature. It has been thought to play a crucial role in motivating prosocial behavior (e.g., Batson, 1987, 2002, 2007) and inhibiting aggression (Eisenberg & Eggum, 2010). In their review paper, Eisenberg and Eggum (2010) indicated that empathy was positively correlated with prosocial behavior and the inhibition of antisocial behavior and aggression.

In addition, empathy has been discussed as an affective source of prosocial behavior (Batson, 2002; Eisenberg & Miller, 1987). Batson (2002) stated that empathic concerns such as compassion and sympathy led individuals to act in altruistic ways. Correspondingly, Toi and Batson (1982) showed that altruistic behavior stems from empathic emotions. They conducted a study in which participants watched a video. In this video a person talked about his problems. Then, the researchers gave participants the opportunity to help the person. The researchers manipulated empathy level by instructing participants either to observe the victim's reactions (low empathy) or to imagine the victim's feelings (high empathy). They

also checked the manipulation by giving empathic emotion checklist. Moreover, the researchers manipulated the refusal variable, making it difficult or easy to refuse to help. They found that participants in low empathy condition were more likely to refuse to help if they were in easy escape condition. In addition, participants in high empathy condition displayed higher helping behavior even in the easy escape condition. Accordingly, they argued that altruistic behavior stems from empathic emotions. In addition, a review conducted by Eisenberg and Eggum (2010) showed that empathy or sympathy is positively correlated with other-oriented prosocial behavior.

In contrast, Cialdini et al. (1987) showed that personal distress (e.g., sadness) rather than empathic emotions (e.g., compassion) is a predictor of helping behavior. In their study, they manipulated the participants in the drug condition by giving a placebo drug. Participants were led to believe that their moods could not be altered through helping because of the temporary effect of a mood-fixing drug. In the drug condition, they found that the participants with high empathy scores did not show more helping behavior than participants with low empathy scores. They argued that when people experience empathy, they also experience personal distress related to the suffering of others. Therefore, people show helping behavior to comfort themselves rather than to reduce others' stress. On the other hand, if people cannot regulate their distress, overarousal may lead to a reduction in helping behavior (Fabes, Eisenberg, & Eisenbud, 1993).

In summary, empathy is one of the variables that have been investigated widely in relation to prosocial behavior. In addition to the empathy, trauma related factors, such as posttraumatic growth have recently examined in relation to prosocial behavior. It seems that although studies mostly focus on positive factors, such as empathy, in explaining prosocial behavior, negative life experience, such as trauma exposure, also play a role in showing prosocial behavior (Vollhardt, 2009).

In the following section, relationship between trauma-related variables, empathy, and prosocial behavior will be reviewed.

1.6. The Association between Trauma Exposure, Posttraumatic stress, Empathy, PTG and Prosocial Behavior

There has been a common view that prosocial behavior arises from positive life experiences and socially inappropriate behaviors such as violent behavior arises from negative life experiences. However, emerging perspectives in clinical psychology and social psychology literature has led to alternative views (Volhardt, 2009). The term altruism born of suffering named by Staub (2003, as cited in Volhardt, 2009, p. 54) describes the process of how individuals who have suffered may specifically show prosocial behavior. Staub and Volhardt (2008) suggested that if people who have highly stressful life events experienced healing and some psychological change, they might show more prosocial behavior compared to pretrauma. Posttraumatic growth (PTG) was mentioned by Vollhardt (2009) among the factors that led individuals to be more prosocial.

Previous studies have provided empirical evidence about the relationship between trauma exposure and prosocial behavior (Frazier et al., 2012; Vollhart & Staub, 2011). Many researchers have examined prosocial behavior in the aftermath of various forms of traumatic events (Raboteg-Saric, Zuzul, & Kerestes, 1994; Yum & Schenck-Hamlin, 2005). Prosocial behaviors after collective traumas, such as wars, or individual traumas, such as serious illness and sexual abuse have been investigated (Grossman, Sorsoli, & Kia-Keating, 2006; Frye, 2014). Moreover, prosocial behaviors that are displayed immediately after the trauma, over time, or beyond the traumatic situation have been investigated (Raboteg-Saric et al., 1994; Yum & Schenck-Hamlin, 2005).

A group of researchers found that prosocial behaviors increase after collectively experienced traumatic events, such as wars and terrorist attacks. Holocaust was one of widely studied topics. As an example, Kahana, Kahana, Harel and Segal (1985) conducted interviews with 100 Holocaust survivors about their war-time experiences. The study results showed that 82 % of the participants reported that they both provided help to others and received help from others. The most frequent types of prosocial behaviors were assisting in avoiding harm (47 % of participants), sharing goods such as food and clothing with others (33 % of participants), and providing socio-emotional support (20 % of participants). Participants indicated that food was shared mostly with family members, but assistance to avoid harm was equally provided to family members and non-family

members. Moreover, protection in high risk situations, such as hiding people from Nazis, was provided to mostly non-family members. Correspondingly, the content analysis of a published testimony that was written by an Auschwitz survivor (Volpato & Contarello, 1999) showed that cooperation, sharing, mutual aid, and the exchange of words, warnings, and confidences were among most frequent types of social behaviors showed toward fellow prisoners in concentration camps.

Yum and Schenck-Hamlin (2005) searched for prosocial behaviors in the aftermath of 9/11 terrorist attacks. They found that showing empathy, donating blood or money, and comforting others were among the most frequent responses to the 9/11 terrorist attacks. Similarly, Penner, Brannick, Webb, and Connell (2005) investigated archival data from a volunteering website and found that volunteering behaviors dramatically increased after 9/11.

In the studies mentioned above, prosocial behavior was generally conducted immediately after the traumatic situations. There have also been studies that investigated prosocial behaviors over time and beyond the traumatic situation. According to a content analysis of audiotaped Holocaust survivor interviews (Suedfeld et al., 2005), survivors were concerned with guiding future generations and preventing similar atrocities by talking about their experiences. Moreover, Raboteg-Saric et al. (1994) investigated 5 and 6-year old children's aggressive and prosocial behaviors before the war in Croatia and one year after the war. Prosocial behaviors were rated by teachers as instances of sharing, comforting, and helping others (e.g., sharing sweets, borrowing toys, feeling sorry for other children in need). They also controlled for age appropriate development of prosocial and aggressive behaviors when analyzing the data. They found that children's prosocial behaviors increased during wartime, while aggressive behavior remained the same.

People may also show prosocial behavior after experiencing intentional harm individually (Stidham, Draucker, Martsof & Mullen, 2012). As an example, the organization of Mothers against Drunk Driving was founded by a mother who lost her child because of an accident caused by a drunk driver (El-Gabalawy, 2012; Frazier et al, 2012). Correspondingly, a qualitative study was conducted to explore the motivations of individuals who politically advocate for people from social outgroups. They indicated that most of these activists reported a previous experience

of marginality in their personal lives. Moreover, a qualitative study conducted with 16 resilient male survivors of serious childhood sexual abuse showed that helping behavior was a type of meaning making of childhood abuse used by participants (Grossman, Sorsoli, & Kia-Keating, 2006). It was also found that helping behaviors were particularly directed towards others who were vulnerable in some ways, such as people with disabilities or AIDS.

There have also been studies that examined traumatic events without any intentional harm from others, such as illness, bereavement, or earthquakes. Reiter-Purtill, Vannatta, Gerhardt, Correll, and Noll (2003) conducted a study with children who were chronically ill and who had completed cancer treatment. They indicated that children who received more intense treatment were perceived by peers as more prosocial and less aggressive 2 years after the treatment ended. Correspondingly, another study conducted with adults having cancer diagnosis for more than 10 years showed increased caring behavior for others among participants (Frye, 2014).

Frazier and colleagues (2012) showed that there was a positive relation between trauma exposure and prosocial behavior. They found that lifetime trauma exposure explained additional variance on prosocial behavior after controlling for the effects of empathy, agreeableness, religiosity, extraversion, and gender. Besides, they found that individuals who experienced a recent trauma engaged more in daily helping behavior than individuals who did not experience a recent trauma.

Vollhardt and Staub (2011) indicated that participants who suffered from a traumatic event were more likely to show volunteering behavior and volunteered for a greater number of organizations. He also found that those who had suffered were particularly engaged in volunteering behavior that benefited disadvantaged groups, which included direct contact with stigmatized outgroups. At the second part of the study, they assessed participants' prosocial attitudes and behaviors towards Tsunami victims. They found that participants who had experienced a similar event type (natural disaster) showed more prosocial attitude than individuals who experienced different types of traumatic events.

In contrast to the findings of Vollhardt and Staub (2011), Trull (2014) could not find any difference in prosocial behavioral tendencies scores between trauma and no trauma groups. Also, she found that prosocial behavioral tendency scores showed

difference between participants with high prosocial behavioral tendency and participants with low prosocial behavioral tendency. She argued that PTG, rather than trauma exposure itself, led to increase in prosocial behavior.

Some studies compared prosocial behavior according to the number or type of the event. Macksoud and Aber (1996) indicated that the number of traumatic experiences had no significant effect on adaptational outcomes among children who were exposed to war. Adaptational outcomes included prosocial behavior and planned behavior, including behavior that utilizes impulse control techniques in problematic situations. In contrast to this finding, Frazier et al. (2012) found that the number of lifetime trauma exposure was positively related with both daily helping behavior and volunteering. Trull (2014) compared prosocial behavioral tendencies across groups who experienced one or many traumatic events. She indicated that participants who experienced more than one type of trauma showed slightly higher prosocial behavioral tendencies than those who experienced only one trauma type, but results were not significant.

Based on the findings reported above, there seems to be a relation between traumatic life experience and prosocial behavior. Also, some authors suggested that more suffering leads to more prosocial behavior (e.g., Reiter-Purtill et al., 2003). Yet, study findings seem inconsistent in terms of the effect of number of traumatic event on prosocial behavior.

Variables that lead individuals to act in a prosocial way in the aftermath of a traumatic event have also been investigated. Empirical findings have suggested mediators such as empathy and reduced in-group bias (Vollhardt & Staub, 2011). Moreover, Vollhardt (2009) proposed that posttraumatic growth (PTG) could mediate the relations between trauma exposure and prosocial behavior. Vollhardt (2009) argued that finding meaning in life was among the motivators that led individuals to act in a prosocial way and posttraumatic growth could lead to finding meaning in the aftermath of traumatic events. Similarly, Triplett et al. (2012) indicated that participants who reported that they were able to make sense of their traumatic experiences also reported higher posttraumatic growth scores.

The role of healing in showing prosocial behavior has also been investigated. Stidham, Draucker, Martsolf, and Mullen (2012) indicated that

participants who could effectively help others believed that their success in helping behavior arose from healing successfully or becoming stronger. Moreover, participants who had not yet experienced much healing showed less effective helping behaviors towards others. Some of the participants in the study suggested that helping others facilitated their recovery process.

Another study conducted by Trull (2014) with university students revealed that participants with high prosocial tendency scores showed higher PTG scores compared to students with low levels of prosocial tendency scores. Tsai, Sippel, Mota, Southwick and Pietrzak (2015) showed similar a trend. They measured PTG scores twice with a two-year interval. Individuals who experienced an increase in the PTG scores during two years were named as PTG maintainers and individuals who experienced a decline in the PTG scores during two years were named as PTG decliners. They found that PTG maintainers showed more altruistic behavior, such as volunteering on a weekly basis, compared to PTG decliners.

Another study done by El-Gabalawy (2010) indicated that there was a positive link between PTG and self-reported altruism. Yet, she also found that there was a negative relationship between PTG and social responsibility, which was one of the domains of a prosocial behavior scale. She argued that PTG may have an indirect effect on prosocial orientation and found that empathy mediated the relationship between prosocial orientation outcomes (e.g., self-reported altruism and social responsibility) and PTG. In contrast, Cohen and Numa (2011) compared PTG scores of breast cancer survivors according to their volunteering condition. They demonstrated that participants who were volunteers did not show higher PTG scores than non-volunteers.

Empathy is one of the most studied variables as a predictor of prosocial behaviors (Eisenberg & Eggum, 2010; Penner, 2002; Toi & Batson, 1982). A few studies investigated empathy in relation to trauma exposure (Barnett, Tetreault, Esper & Bristow, 1986; Vollhardt, 2009). These studies showed that participants who had similar traumatic experience with the traumatized person were more likely to express empathy about the experience of traumatized person than participants who did not have a similar experience. Yet, it is difficult to interpret the relation between trauma exposure and empathy based on a limited number of studies. On the other hand,

because there is a strong relation between prosocial behavior and empathy (Toi & Batson, 1982), empathy was included as a control variable in the present study.

In summary, although studies mostly focused on positive factors, such as empathy, in explaining prosocial behavior, negative life experience, such as trauma exposure, also play a role in showing prosocial behavior (Vollhardt, 2009). Posttraumatic growth is among proposed mediators that play a role in this association. Yet, there are limited numbers of studies that investigated the direct role of trauma exposure on prosocial behavior. Thus, one of the aim of the current study is to examine prosocial behavioral tendency scores difference between participants with trauma exposure and participants without trauma exposure. Moreover, another aim of the study is, controlling the effect of empathic tendency, to investigate the mediating role of PTG on the relationship between posttraumatic stress symptoms and prosocial behavior.

1.7. Hypotheses

The present study investigated the relationship between trauma exposure and prosocial behavior. More specifically, the study aimed to investigate the difference in prosocial behaviors across trauma and non-trauma groups. Moreover, the mediating role of post-traumatic growth on the relation between trauma-related stress and prosocial behavioral tendencies was investigated. It was hypothesized that:

1) Participants in the trauma group would get higher prosocial behavioral tendency scores than participants in the non-trauma group.

2) After controlling for the effect of empathic tendencies, posttraumatic growth would mediate the proposed relationship between posttraumatic stress disorder (PTSD) symptom severity and prosocial behavioral tendencies.

CHAPTER 2

METHOD

In this section, characteristics of the participants and content and psychometric properties of the study variables were elaborated. Then, data gathering and data analyses process were explained.

2.1. Participants

Data were collected from 408 university students. All participants except 4 people received half a point research participation credits to participate in the study. Fourteen point two per cent of the participants did not experience any traumatic event. Thirty six point eight per cent of the participants experienced at least one traumatic event in the last five years, and 49 % of the participants experienced at least one traumatic event more than 5 years ago. Only the participants with trauma history in the last 5 years were included in the present study. Participants with trauma experience more than 5 years earlier were excluded. Thus, 150 students with at least one traumatic life events in the last 5 years and 58 students without any trauma exposure participated in the study. Of the 150 students who experienced trauma, 89 participants were female (59.3 %) and 61 participants were male (40.7 %). Of the 58 students without trauma exposure, 34 participants were female (58.6 %) and 24 participants were male (41.4 %). The ages of participants ranged between 19 and 35 ($M = 21.7$, $SD = 2.04$) for trauma group and between 19 and 30 ($M = 21.5$, $SD = 1.88$) for non-trauma group. Nine participants (6 %) in the trauma group have lived longest in a village or town, 46 people (30.7 %) have lived longest in a city and 95 people (63.3 %) in a metropolitan area. In the non-trauma group, 3 people (5.2 %) have spent most of their life in a town, 23 people (39.7 %) in a city, and 32 people (55.2 %) in a metropolitan area. Frequency and percentage of participants' gender and income level were summarized in Table 2.1 and Table 2.2.

Table 2.1

Frequency and Percentage of Participant's Gender

	Trauma	No trauma	Total
Gender	150 (%)	58 (%)	208 (%)
Female	89 (59.3 %)	34 (58.6 %)	123 (59.1 %)
Male	61 (40.7 %)	24 (41.4 %)	85 (40.9 %)

Table 2.2

Frequency and Percentage of Participant' Income Level

	Trauma	Non-trauma	Total
Income Level	150 (%)	58 (%)	208 (%)
<2000	28 (18.7 %)	13 (22.4 %)	41 (19.7 %)
2001-4000	57 (38 %)	22 (37.9 %)	79 (38 %)
>4000	65 (43.3 %)	23 (39.7 %)	88 (42.3 %)

2.2. Instruments

After presenting the informed consent form (see Appendix A), a demographic data form was presented to the participants for obtaining information on gender, age, education level, income level, and the type of city or town in which participants lived for the longest (see Appendix B). Afterwards, participants filled out four different questionnaires including Prosocial Tendencies Measure (PTM), The Posttraumatic Stress Diagnostic Scale (PDS), Post Traumatic Growth Inventory (PTGI), and Empathic Tendency Scale.

2.2.1. Prosocial Tendencies Measure (PTM)

PTM was initially developed by Carlo and Randal (2002) to assess prosocial behavioral tendencies of university students. This is a 23-item self-report measure and consists of 6 subscales. Subscales are *compliant* (e.g., “When people ask me to help them, I don’t hesitate”), *public* (e.g., “I can help others best when people are

watching me”), *anonymous* (e.g., “I tend to help needy others most when they do not know who helped them”), *dire* (e.g., “I tend to help people who hurt themselves badly”), *emotional* (e.g., “I tend to help others particularly when they are emotionally distressed”), and *altruistic* (e.g., “I think that one of the best things about helping others is that it makes me look good”) (Carlo & Randal, 2002, p. 42). Participants are asked to rate how well each item describes them on a 5-point scale where “1 = does not describe me at all and 5 = describes me greatly” (Carlo & Randal, 2002, p. 42). Only items under altruism subscale are reverse scored. High scores mean higher tendency for prosocial behavior.

Carlo and Randal (2002) reported that internal consistency coefficient of the scale was .73. Test-retest reliability with a 2 week interval were 0.61, 0.75, 0.72, 0.80, 0.73, and 0.60 for public, anonymous, dire, emotional, compliant, and altruism subscales, respectively. Furthermore, they checked validity by exploring its correlation with other measures of prosocial behavior. They reported that the compliant subscale of PTM was positively correlated with *helping behavior measure* that is subscale of the Primary Prevention Awareness, Attitudes and Usage Scale (PPAAUS; Swisher et al., 1985). Correlation coefficient was .45. Furthermore, dire subscale of PTM was related to both *the time* and *time/effort altruism* subscales of Altruistic Behavior Measures (Johnson et al., 1989). Correlation coefficients were reported as .42 and .44, respectively. The authors proposed that PTM suggested adequate validity.

PTM was adapted to Turkish by Kumru, Carlo and Edwards (2004) for youth between 11-21 years old. Then, Yıldız, Boz, and Yıldırım (2012) adapted the scale for graduate and undergraduate students (20-26 years old). Yıldız and colleague’s (2012) translation was used in the present study. Yıldız et al. (2012) obtained 4 factors in their adaptation study, that are public, anonymous, altruism and compliant. The four factor solution explained 56% of the variance. In addition, Cronbach's alpha coefficients for the subscales were reported to be between 0.64 and 0.68. Yıldız et al. (2010) suggested that alpha levels and explained variance were sufficient for each factor. The alpha coefficient of PTM was .71 for the present study.

2.2.2. The Posttraumatic Stress Diagnostic Scale (PDS)

The Posttraumatic Stress Diagnostic Scale (PDS) was developed by Foa, Cashman, Jaycox, and Perry (1997) to measure the level of posttraumatic stress. The scale can also be used to diagnose posttraumatic stress disorder (PTSD) according to DSM-IV criteria. In the present study, the scale was used to assess PTSD symptom severity. It is a 50-item scale and composed of four parts. In the first part, there is a traumatic event checklist to explore the type of traumatic experiences (e.g., natural disaster, accident, life-threatening illness). If a person has experienced or witnessed more than one type of traumatic event, they are asked to choose the traumatic event that has the most impact on them for the rest of the PDS. The second part includes a question about the amount of time elapsed since the traumatic event and six questions that measure perceived life threat, injury, and feelings of helplessness or terror at the time of the traumatic event. The third part measures PTSD symptom severity which includes 17 questions regarding PTSD symptoms. Each question is rated on a 4-point scale. Responses range from 0 “not at all or only one time” to 3 “five or more times a week/almost always” (Foa et al., 1997, p. 448). This part has three subscales based on DSM-IV criteria for PTSD; re-experiencing, avoidance, and hyper-arousal. The fourth part of PDS assesses the level of daily functioning in different settings, such as work, school, and friend relations that may be affected by the traumatic event.

Foa et al. (1997) reported that the internal consistency of 17-item PTSD severity subscale was .92, and test-retest reliability coefficient was .83. Moreover, Foa et al. checked concurrent validity of PTSD symptom severity scores with other measures of trauma related psychopathology. They reported high correlations between PTSD symptom severity subscale and The Beck Depression Inventory (BDI; Beck, Ward, Mendelsohn, Mock, & Erbaugh, 1961), The State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970), and The Revised Impact of Events Scale (RIES; Horowitz et al., 1979), as .79, .73 and .78, respectively.

The PDS was adapted to Turkish by Işıklı (2006). He reported that the internal consistency of 17-item PTSD severity subscale was .93. Moreover, the responses for the 17 items of PTSD severity subscale were subjected to factor analysis. Three factor-solution was obtained and explained 59% of the variance. Işıklı (2006) reported psychometric properties of the Turkish version as satisfactory.

In the present study, PDS was used to examine lifetime experiences of various types of traumatic events (first part of PDS). Furthermore, PDS was used to identify the most distressing event, and determining the time of the event (a section from second part of PDS). Finally, PDS was used to measure PTSD symptom severity. PTSD symptom severity scores were obtained by summing the scores of posttraumatic symptoms. PTSD severity scores were used to operationalize ongoing psychological effect of the traumatic event on the participants. Forth part of PDS was not included in the study. The alpha coefficient of PTSD symptom severity subscale was .94 for the present study.

2.2.3. Post Traumatic Growth Inventory (PTGI)

PTGI was developed by Tedeschi and Calhoun (1996) to assess perceived positive changes as a result of coping with traumatic life events. The scale consists of 21 items and 5 subscales. These subscales include *new possibilities* (5 items), *relating to others* (7 items), *personal strength* (4 items), *spiritual change* (2 items), and *appreciation of life* (3 items). PTGI is a 6-point Likert-type 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” (Tedeschi & Calhoun, 1996, p. 459).

Tedeschi and Calhoun (1996) stated that the internal consistency coefficient of the scale was .90 and the test-retest reliability with a 2-month interval was .71. They also checked concurrent validity by examining its correlation with growth related personality characteristics. They reported moderate correlation between PTG and *optimism* and *extraversion* subscales of NEO Personality Inventory (Costa & McCrae, 1985) as .21 and .29, respectively.

PTGI was translated to Turkish first by Kılıç (2005) and later by Dirik (2006). Dirik also made some modifications in the scale and obtained a 3-factor solution in her study. These factors were change in interpersonal relations ($\alpha = .86$), change in philosophy of life ($\alpha = .87$), and personal strength ($\alpha = .88$). In addition, internal consistency of the whole scale was .94. Dirik's (2006) translation was used in this study.

Karanci and colleagues (2012) reported a five-factor solution of PTGI as in the original scale. The Cronbach alpha for the scale was .93. The internal

consistencies of five factors were .81 for new possibilities, .83 for appreciation of life, .79 for greater sense of personal strength, .76 for spiritual change, and .79 for relating to others.

PTGI was used in this study to examine positive transformations in the aftermath of traumatic events. The item-total correlation of one of the items was low (.35), and thus, item 14 was excluded from the data. The alpha coefficient of PTG scale was .94 for the present study.

2.2.4. Empathic Tendency Scale

Empathic Tendency Scale was developed by Dökmen (1989) to measure individual's tendency to show empathy in daily life. The scale consists of 20 items scored between 1 and 5. Eight Items (3, 6, 7, 8, 11, 12, 13, and 15) are reverse scored. The test-retest reliability of the scale with a 3-weeks interval was .82. Dökmen (1989) compared Empathic Tendency Scale with the understanding subscale of the Edwards Personal Preference Schedule to test its validity and reported the relation between them as .68. The alpha coefficient of Empathic Tendency Scale was .74 for the present study.

2.3. Procedure

Permission for research with human participants was taken from The Applied Ethics Research Center of Middle East Technical University. Then, an online survey was developed on www.qualtrics.com, including informed consent form, demographic information form, and the instruments used in the study.

Statistical analyses of data were conducted via Statistical Package for the Social Sciences (SPSS). Firstly, data cleaning was conducted before analyses. Then, descriptive analyses for demographic variables and study variables were presented. Then, mean score difference of prosocial behavioral tendencies between trauma and non-trauma groups was analyzed via independent samples *t*-test. Correlation coefficients were also calculated in order to evaluate the relation among the measures of the study. Finally, in order to investigate posttraumatic growth's mediator role in the relation between trauma-related stress and prosocial behavior, mediation analysis via Bootstrap sampling method was employed with empathic tendency as a control variable.

CHAPTER 3

RESULTS

In this section, after presenting the data screening process, descriptive statistics were reported. Following, mean score difference between trauma and non-trauma group on prosocial behavioral tendencies via *t*-test was explained. After displaying inter-correlations among study variables, results of mediation analyses were given.

3.1. Data Screening Prior to Analyses

All variables were examined for accuracy of data entry, outliers, multicollinearity, and linearity. Five multivariate outliers identified through Cook's distance were excluded from the analyses. Therefore, 145 participants remained for analyses. Moreover, normality assumption of residuals and linearity assumption were met. Finally, multicollinearity assumption was tested by controlling the tolerance and VIF in linear regression analysis and no multicollinearity was detected among variables.

3.2. Descriptive Statistics

Frequency and percentage of experiencing different types of traumatic events were calculated (see Table 3.3). Of 203 participants, 71.4 % of them experienced at least one traumatic event throughout their lives and 28.6 % reported no lifetime trauma exposure. Accident, fire, or explosion (32 %), natural disaster (42.9 %), and unexpected death of a loved (54.7 %) were most commonly experienced traumatic events. Five point four percent of the participants reported traumatic events under the other category. The types of events reported under the other category were family problems ($n = 2$), other clinical illness ($n = 3$), bomb explosion ($n = 1$), slander to family ($n = 1$), being unemployed ($n = 1$), psychological problems ($n = 1$). Two of the participants did not report the type of trauma that they experienced.

Table 3.3

Frequency and Percentage of Different Types of Traumatic Events.

Experienced Traumatic Event	<i>N</i> = 203
	Frequency(%)
1. Unexpected or sudden death of a loved one	111 (54.7)
2. Natural Disaster	87 (42.9)
3. Accident, fire, or explosion	65 (32)
4. Non-sexual assault by a stranger	25 (12.3)
5. Life-threatening illness	21 (10.3)
6 Sexual contact under age 18 with someone 5 or more years older	18(8.9)
7. Non-sexual assault by a family member or acquaintance	18(8.9)
8. Sexual assault by a stranger	13 (6.4)
9. Other events	11 (5.4)
10. Sexual assault by a family member or acquaintance	7 (3.4)
11. Torture	4(2)
12. Imprisonment	3 (1.5)
13. Combat or war zone	2(1)

Frequency and percentage of the most distressing traumatic events were also calculated (see Table 3.4). Unexpected death of a loved one (36 %) and accident, fire or explosion (13.3 %) were defined as most distressing. Two point five percent of participants reported most distressing traumatic events under the other category. The types of events reported as most distressing under the other category were family problems ($n = 1$), other clinical illness ($n = 2$), bomb explosion ($n = 1$), and slander to family ($n = 1$).

Table 3.4

Frequency and Percentage of the Most Distressing Traumatic Event.

Most Distressing Traumatic Event	N=203 Frequency (%)
1. Unexpected or sudden death of a loved one	73 (36)
2. Accident, fire, or explosion	27(13.3)
3. Life-threatening illness	11 (5.4)
4. Natural Disaster	9 (4.4)
5. Sexual assault by a stranger	7 (3.4)
6. Other events	5 (2.5)
7. Non-sexual assault by a family member or acquaintance	4 (2)
8. Sexual assault by a family member or acquaintance	2 (1)
9. Non-sexual assault by a stranger	2 (1)
10. Imprisonment	2 (1)
11. Combat or war zone	1 (.05)
12. Sexual contact under age 18 with someone 5 or more years older	1 (.05)
13. Torture	1 (.05)

Furthermore, the mean and standard deviation scores for each of the instruments were calculated for trauma group and non-trauma group participants (see Table 3.5).

Table 3.5

Means and Standard Deviations of Prosocial Tendencies Measure, PTSD Severity, Posttraumatic Growth Inventory, and Empathic Tendency Scale

	Trauma (n = 145)		No trauma (n = 58)		Total (n = 203)	
	Mean	SD	Mean	SD	Mean	SD
PTM	77.90	8.53	73.93	10.83	76.76	8.75

Table 3.5 (Continued)

	Trauma (<i>n</i> = 145)		No trauma (<i>n</i> = 58)		Total (<i>n</i> = 203)	
	Mean	<i>SD</i>	Mean	<i>SD</i>	Mean	<i>SD</i>
PTSD Severity	9.39	11.10	-	-	-	-
PTG	40.92	24.92	-	-	-	-
ETS	66.84	9	65.25	8.06	66.38	8.75

Note. PTM: Prosocial Tendencies Measure, PTSD Severity: Posttraumatic Stress Disorder Symptom Severity, PTG: Posttraumatic Growth, ETS: Empathic Tendency Scale.

3.3. Mean Scores Differences in Prosocial Behavioral Tendencies between Trauma and Non-trauma Groups

Independent samples *t*-test was conducted to investigate mean score differences across trauma and non-trauma groups. Trauma condition (trauma vs non-trauma groups) was the levels of independent variable and PTM scores were the dependent variable.

Before conducting the analysis, assumptions of *t*-test were tested. The prosocial tendencies measure (PTM) scores were distributed normally across trauma group and non-trauma group participants. Besides, independent sampling assumption of *t*-test was met. However, Levene's test for equality of variances was found to be violated, $F(1,201) = 5.18, p < .05$. Owing to this violated assumption, a *t* statistic not assuming homogeneity of variance was reported.

Independent *t*-test results for PTM scores revealed that there was a group differences between trauma and non-trauma groups, $t(86) = 2.50, p = .014, \eta^2 = .06$. Participants in trauma group got higher PTM scores ($M = 77.90, SD = 8.53$) than participants in non-trauma group ($M = 73.93, SD = 10.83$). These results showed that participants who were exposed to at least one traumatic event had significantly higher prosocial behavior tendencies than those who were not exposed to any trauma.

3.4. Inter-correlations among Variables of the Study

Before conducting mediation analysis, bivariate Pearson Correlation analyses were conducted among trauma group participants in order to evaluate the relation among the study variables (see Table 3.6).

As can be seen in Table 3.6, results did not reveal a significant positive correlation between prosocial behavioral tendencies and posttraumatic stress disorder symptom severity, $r(143) = .134, p > .05$. This result implied that as PTSD symptom severity increased, prosocial behavioral tendency scores did not increase. However, Hayes (2009) argued that a significant relation between independent variable and dependent variable was not necessary for mediation analysis. He argued that a total effect (the effect of independent variable on dependent variable) was the sum of many different paths of influence. If some factors are operating in the opposite direction, it might lead to a non-significant total effect.

Posttraumatic stress disorder (PTSD) Symptom Severity was positively correlated with Posttraumatic Growth, $r(143) = .323, p < .01$. That is, as the PTSD symptom severity increased, trauma-related growth also increased. In addition, Posttraumatic Growth was positively correlated with Prosocial Behavioral Tendencies, $r(143) = .247, p < .01$. Furthermore, Empathic Tendencies Scale scores were significantly related with Prosocial Behavioral Measure scores, $r(143) = .270, p < .01$. In addition, results revealed that empathic tendency was negatively correlated with trauma-related stress, $r(143) = -.174, p < .05$.

Table 3.6

Inter-correlations among Variables of the Study

	PTM	PTSD Severity	PTG	ETS
PTM	1	.134	.247**	.270**
PTSD Severity		1	.323**	-.174*
PTG			1	.047
ETS				1

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

Note 2. PTM: Prosocial Tendencies Measure, PTSD Severity: Posttraumatic Stress Disorder Symptom Severity, PTG: Posttraumatic Growth, ETS: Empathic Tendency Scale.

3.5. The Mediating Role of Posttraumatic Growth in the Relation between Posttraumatic Stress Disorder Symptom Severity and Prosocial Behavioral Tendencies

Mediation analysis was conducted to test the hypothesis that after controlling the effect of empathic tendencies, posttraumatic growth would mediate the relation between PTSD severity and prosocial behavioral tendencies. Analysis was conducted via indirect custom dialog for SPSS (Preacher & Hayes, 2008). Using bootstrapped sampling, 5000 resamples were generated from the original data set to investigate the indirect effect of mediator variable. Confidence interval (CI) of the indirect effect was evaluated to determine the significance of indirect effect in the mediation model. If the indirect effect within 95% CI did not include zero, it was considered to be statistically significant.

According to the results of mediation analysis, total effect (path c) of PTSD symptom severity on prosocial behavioral tendencies was significant ($B = .14$, $SE = .062$, $p < .05$). In other words, posttraumatic stress disorder (PTSD) symptom severity predicted the probability of showing prosocial behavioral tendencies after controlling the effect of empathic tendencies. Moreover, the direct effect of the PTSD severity on the prosocial behavioral tendencies was not significant (path c')

once the PTG was taken into account as mediating variable ($B = .088$, $SE = .065$, $p = .175$).

Moreover, the more individuals experienced trauma-related stress, the more they had posttraumatic growth outcomes (path a) ($B = .767$, $SE = .180$, $p < .001$), which in turn increased prosocial behavioral tendency scores (path b) ($B = .067$, $SE = .028$, $p < .05$). In addition, results showed that empathic tendencies had partial effect on prosocial behavioral tendencies ($B = .245$, $SE = .076$, $p < .01$).

True indirect effect via PTG was 95 % likely to range from .01 to .11. Also, the estimated effect was .05. Because zero did not occur between lower limit and upper limit, it was concluded that after controlling the effect of empathic tendencies, the indirect effect of PTSD symptom severity on prosocial behavioral tendencies through trauma-related growth was significant (See Figure 3.1). In general, the model was significant $F(3, 141) = 6.94$, $p < .001$, and this model predicted 12% of the variance in prosocial behaviors from PTSD symptom severity through posttraumatic growth outcomes.

Same procedure was conducted without controlling for empathic tendencies, and a significant indirect effect was obtained again, 95% CI [0.01, 0.12]. Yet, the positive relation between prosocial behavioral tendencies and PTSD symptom severity turned into a non-significant relationship. The negative relation between empathic tendencies and PTSD symptom severity ($r = -.174$, $p < .01$) could lead a non-significant total effect turn into significant total effect when the effect of empathic tendencies is controlled.

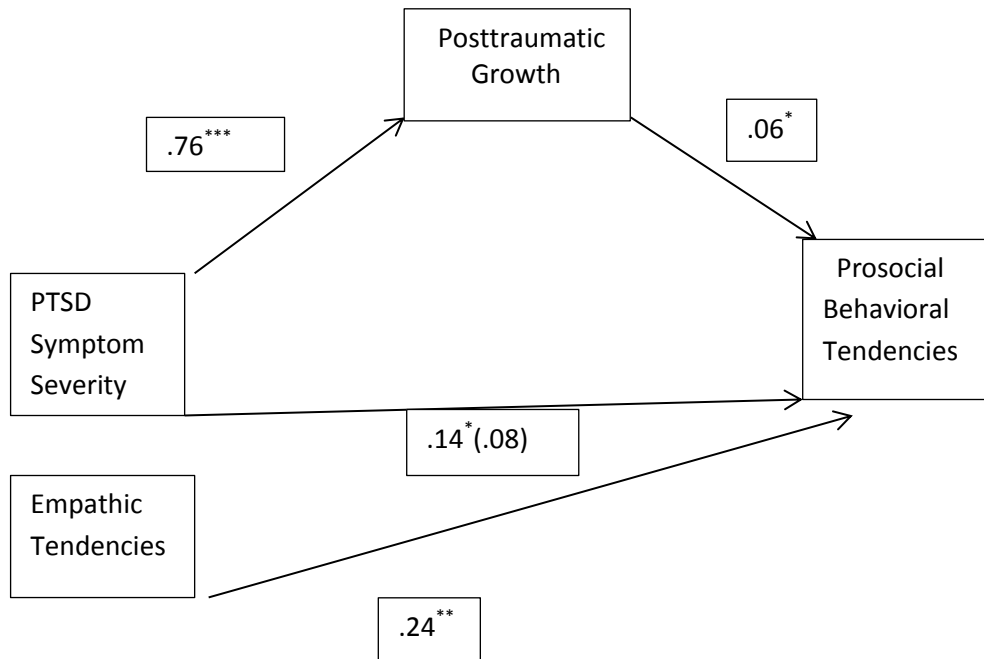


Figure 3.1. Unstandardized regression coefficients for the relationship between PTSD symptom severity and prosocial behavioral tendencies as mediated by posttraumatic growth, after controlling the effect of empathic tendencies. The unstandardized regression coefficient for the direct effect of the PTSD symptom severity on the prosocial behavioral tendencies has been parenthesized.

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

CHAPTER 4

DISCUSSION

Study findings showed that participants who experienced traumatic life event(s) showed higher prosocial behavioral tendencies than participants without any trauma exposure. In addition, participants who experienced higher levels of trauma-related stress had higher levels of trauma-related growth, and through higher levels of trauma-related growth, they showed higher levels of prosocial behavioral tendencies. Moreover, the positive relation between trauma-related stress and prosocial behavioral tendencies via post-traumatic growth was sustained even when their empathic tendency scores were controlled. In this section, these study findings were evaluated in the light of both previous findings and theoretical models. Then, limitations and strengths of the study were discussed. Finally, clinical implications and suggestions for future studies were stated.

4.1. Evaluation of the Findings

According to the results of independent *t*-test analysis, participants in trauma group showed higher prosocial behavioral tendency than participants in non-trauma group. This result is consistent with previous findings (Frye, 2014; Raboteg-Saric et al., 1994). In previous studies, participants showed increased prosocial behavior in the aftermath of a traumatic event. Moreover, Vollhardt and Staub (2011) also compared trauma and non-trauma groups. They found that participants who suffered from a traumatic event were more likely to show volunteering behavior when compared to non-trauma group.

Vollhardt (2009) suggested that people in the aftermath of a traumatic event could show increased prosocial behavior if they also experienced some psychological change, such as increased self-efficacy, empathy, perspective taking and social integration. A traumatized person can perceive common fate that is shared experience of suffering with the other person in need. The perception of common fate may lead to categorization of person in need as part of a common ingroup that increases the probability of showing prosocial behavior (Vollhardt, 2009).

Correspondingly, Dovidio and Morris (1975) showed that the perception of common fate in highly stressful condition increased the probability of helping others.

A person in the aftermath of a traumatic event can experience increased personal strength (Vollhardt, 2009). Dealing with a traumatic experience may lead to increase in self-efficacy (Tedeschi et al., 1998). Moreover, a person can develop more intimate relationship with others (Tedeschi et al., 1998). The awareness about vulnerability may lead to closer interpersonal relationship (Tedeschi et al., 1998). Psychological changes that occur in the perception of self and relationship with others (Tedeschi et al., 1998; Tedeschi & Calhoun, 2004; Zoellner & Maercker, 2006) were also discussed in the posttraumatic growth literature. Thus, trauma exposure can lead to increased prosocial behavior through posttraumatic growth (Vollhardt, 2009). Similarly, Trull (2004) found that person with high PTG scores showed more prosocial behavior when compared to person with low PTG scores.

Posttraumatic stress disorder symptom (PTSD) severity was used to measure the ongoing effect of trauma on participants. Results did not reveal a significant correlation between prosocial behavioral tendencies and PTSD symptom severity. There have been a few findings about the relation between posttraumatic stress and helping behavior. A study done by Kishon-Barash, Midlarsky and Johnson (1999) with war veterans who were undergoing treatment for PTSD showed that altruistic intent was negatively related to PTSD symptoms. In their study, participants were chronically distressed veterans. The fact that participants were experiencing long term chronic stress might have affected the results of the study. Moreover, in line with the present study's result, Coleman (2013) could not find any relationship between PTSD symptoms and helping behavior among participants with PTSD diagnosis 4 months after Hurricane Katrina.

Hayes (2009) argued that the effect of one variable on another variable included many different paths of influence. He stated that if some factors were in the opposite direction, it might lead to a non-significant relation. This seems to be a plausible explanation for the lack of a significant correlation between prosocial behavioral tendencies and PTSD symptom severity in the present study. Empathic tendency was positively related with prosocial behavior and negatively related with PTSD symptom severity. On the other hand, PTSD symptom severity was positively

related with PTSD and PTG was positively related with prosocial behavior. Because of the influence of different paths that connect PTSD symptom severity and prosocial behavior, a significant relationship between PTSD symptom severity and prosocial behavior could not be observed.

A positive correlation between PTSD symptom severity and posttraumatic growth (PTG) scores was obtained. This finding is consistent with the related literature (Cadell et al., 2003; Helgeson et al., 2006). Tedeschi and Calhoun (2004) proposed that posttraumatic growth is not a direct result of a highly stressful negative life event. It is a result of individual's struggle with new circumstances after a traumatic event. If an event leads individuals to question and then restructure their schematic structure, individuals may experience psychological changes in their decision-making processes. Thus, trauma related stress can be more than an index of stress (Joseph & Linley, 2006). It can reflect current cognitive processing of the traumatic event (Horowitz, 1991, as cited in Park et al., 1996, p. 58). Because traumatic event destroys assumptions about the self and the world, it can reflect a process of rebuilding those assumptions (Joseph & Linley, 2006). This explanation seems appropriate for the present study's results. As an individual continues to process the traumatic event, it is possible to experience PTG as a result of posttraumatic symptoms.

Furthermore, a positive correlation between posttraumatic growth and prosocial behavioral tendencies was obtained. Correspondingly, literature findings also indicated a positive relationship between the two variables (El-Gabalawy, 2010; Stidham et al., 2012; Tsai et al., 2015). Trull (2014), for example, revealed that participants with higher prosocial tendency scores showed higher PTG scores compared to participants with lower levels of prosocial tendency scores.

Tedeschi et al. (1998) suggested that trauma-related growth could be observed in the perception of self and interpersonal relationships. When an individual experiences growth, she or he can perceive herself or himself as a survivor of a trauma rather than a victim. Thus, she or he can experience an increase in self-efficacy or self-reliance. Moreover, she or he can have awareness about her or his vulnerability. Consequently, she or he can experience an increase in self-disclosure, an improvement in interpersonal relationships, and more compassion toward others

(Tedeschi et al., 1998). Closer relationships and increased self-efficacy may encourage people to show prosocial behavior (Vollhardt, 2009).

Literature findings explain the connection between prosocial behavior and growth-related psychological variables. As an example, Twenge, Baumeister, DeWall, Ciarocco, and Bartels (2007) manipulated participants so that the participants in the social exclusion condition were lead to believe that they were socially isolated by others. They told participants that they will be alone in later life or that other participants had rejected them. They found that participants in social exclusion condition showed less prosocial behavior. On the other hand, social popularity, which is being liked among one's peers (Pakaslahti, Karjalainen, & Keltikangas-Järvine, 2002), or peer acceptance (Wentzel & McNamara, 1999), was positively related to prosocial behavior. Moreover, Stidham et al. (2012) found that feeling stronger was related with helping behavior. It seems that literature findings support the relationship between growth-related psychological change and prosocial behavior.

Moreover, trauma leads to the destruction of previous meaning system (Vollhardt, 2009). Vollhardt (2009) proposed that helping behavior can facilitate finding meaning in traumatic events. Making sense of a traumatic experience is also related with higher posttraumatic growth scores (Triplett et al., 2012). That is, helping behavior can be conducted as a way of finding meaning in the traumatic event.

In summary, there are two possible explanations for the relation between PTG and prosocial behavioral tendencies. These are change in a person's assumptions about self, others and world that may lead increased prosocial behavior and finding meaning in traumatic event by helping. These two possible underlying mechanisms may act simultaneously. A person who experiences trauma-related adaptive changes in his or her assumptions about self, others, and the world may show higher prosocial tendencies and also find meaning in the traumatic events by his or her helping behavior.

PTSD symptom severity was negatively related with empathic tendency scores. This finding is consistent with literature findings (Parlar et. al, 2014). PTSD can be related to impairments in interpersonal relationships (Mendlowicz, & Stein,

2014). These deficits may be related to decrease in empathic abilities (Parlar et al., 2014). Moreover, empathic tendency was positively related with prosocial behavioral tendencies. This finding is consistent with both theoretical views (Batson, 2002) and empirical findings (Batson et al., 2007). Empathy has been accepted as an affective source of prosocial behavior (Batson, 2002, Eisenberg & Miller, 1987) and literature findings have supported this hypothesis (Batson et al., 2007; Toi & Batson, 1982).

Finally, no significant relation between PTG and empathy was observed. A few studies have examined the association between these two variables and it found to be significant (Brockhouse, Msetfi, Cohen, & Joseph, 2011; El-Gabalawy, 2010). Present study finding was not consistent with previous findings. Brockhouse, Msetfi, Cohen, and Joseph (2011) argued that empathic ability is related to more-flexible schemas. Schemas' being flexible is also related to an individual's being more prone to change in his or her schematic structure which facilitates PTG. Predictably, El-Gabalawy (2010) found a significant relationship between empathy and PTG scores. Insignificant relationship between empathy and posttraumatic growth scores in the present study might be related to the way empathy was measured. The scale used in the present study measures individual's tendency to show empathy in daily life rather than cognitive or affective aspects of empathy (Dökmen, 1988). However, previous research mentioned above found significant relationship between cognitive and affective aspects of empathy and PTG. Also there has been very limited numbers of studies that investigate relationship between empathy and PTG. Thus, it is difficult to claim a significant relation between two variables.

According to the results obtained from the mediation analysis, after controlling the effect of empathic tendencies, posttraumatic growth mediated the relation between PTSD symptom severity and prosocial behavioral tendencies. That is, PTG has an indirect effect on the connection between PTSD symptom severity and prosocial behavioral tendencies.

Literature findings have suggested a relationship between trauma exposure and prosocial behavior (Fraizer et al., 2012; Vollhardt & Staub, 2011). PTSD symptom severity was used to operationalize the ongoing psychological effect of trauma exposure on participants. Yet, not every person who experiences trauma

shows prosocial acts (Vollhardt, 2009). Psychological changes observed during PTG may lead an individual to engage in prosocial behaviors. The mediation analysis in the present study supported this link. Accordingly, individuals who experienced trauma were more likely to show prosocial behavior if they experienced posttraumatic growth.

PTG causes an improvement in an individual's psychological capacities compared to pre-trauma (Janoff-Bulman, 2004; Zoellner & Maercker, 2006). When an individual experiences growth, she or he can experience an increase in self-efficacy, emotional expressiveness and self-disclosure, improvement in interpersonal relationships, and more compassion towards others (Tedeschi et al., 1998). Increased self-efficacy, self-disclosure, and closer relationships with others may encourage people to show more prosocial behavior (Vollhardt, 2009). Moreover, a traumatic event destroys assumptions about the self and the world. PTSD symptoms can reflect a process of rebuilding of these assumptions (Joseph & Linley, 2006). The results implied that the link between PTSD and prosocial behaviors is also related with PTG. Thus, an individual might show more prosocial behavior to deal with the aftermath of trauma and to find meaning in the traumatic event.

This model has not been investigated before. Yet, literature findings have pointed to the relationship. PTSD symptom severity has been found related with PTG in many studies (Cadell et al., 2003; Helgeson et al., 2006). This relationship implies that trauma exposure or trauma-related stress can be related with positive outcomes. Moreover, a relationship between PTG and prosocial behavioral tendencies has been established in previous studies (Trull 2014; Tsai et al., 2015).

In summary, an indirect effect of trauma exposure on prosocial behaviors was supported in the present study. That is, individuals who experience higher levels of PTSD symptom severity also have higher levels of PTG scores, and through PTG, they show higher levels of prosocial behavioral tendencies.

4.2. Limitations and Strengths of the Study

First limitation is related to sample characteristics. All participants were university students and age range was limited. Moreover, most of them came from cities or metropolitan areas. These characteristics of the sample decrease generalizability of the findings to a population with dissimilar characteristics. Second

limitation of the study is related with the types of traumas. There were different kinds of traumatic life events in trauma checklist; however, participants did not equally report all type of traumatic events. The effect of kinds of traumatic event such as human-made versus natural disaster might show difference in predicting helping behavior. Finally, the sample size difference between trauma and non-trauma group was another limitation of the study.

First strength of the study is that present study was one of the few studies that compared prosocial behavioral tendency scores across a trauma group and a non-trauma group. It is difficult to claim that prosocial behavior show difference across trauma and non-trauma groups without this information. Second strength of the study is that present study was the only study that shows an indirect effect of posttraumatic stress disorder (PTSD) symptom severity on prosocial behavior through posttraumatic growth. Previous studies have suggested a relationship between trauma exposure and prosocial behavior (Frazier et al., 2012). Yet, it is important to figure out possible mediator or moderator in explaining this relation. Information about possible mechanisms that account for this relation can be beneficial for empowering positive outcomes in the aftermath of a traumatic event.

4.3. Clinical Implications and Suggestions for Future Studies

Negative outcomes of traumatic events, such as substance use or violent behaviors were widely noted in the literature (Vollhardt, 2009). Focusing on positive outcomes, such as prosocial behavior, is also important in terms of empowering traumatized people to increase these kinds of outcomes. Furthermore, results of the present study imply that trauma exposure may lead to psychological changes that benefit the person himself or herself and others.

Moreover, results showed that if traumatized people can perceive positive outcomes related with the traumatic event, they can show more adaptive behaviors. This findings show importance of healing and post-trauma rehabilitation for people at risk following a trauma. Present study results imply that trauma exposure does not always lead to negative psychological outcomes such as substance use or violent behavior. If person with trauma exposure has opportunity to have awareness about traumatic experience, the probability of showing positive outcomes increases. Thus, post-trauma rehabilitation gains importance.

Present study suggested that posttraumatic stress disorder (PTSD) symptom severity has an indirect effect on prosocial behavioral tendencies through posttraumatic growth. Yet, previous studies have proposed alternative mediators such as empathy and reduced in-group bias (Vollhardt & Staub, 2011). Moreover, Vollhardt (2009) proposed different kinds of mediators such as empathy, perspective taking, and similarity with the person in need, and moderators such as emotional control. Future studies can examine the effect of these possible mediators or moderators in addition to the ones investigated in the present study. In addition, qualitative studies can help understand the underlying mechanisms in the relation between trauma exposure and prosocial behavior.

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APPENDICES

A. Informed Consent Form

Gönüllü Katılım Formu

Bu çalışma Orta Doğu Teknik Üniversitesi (ODTÜ) Psikoloji Bölümü – Klinik Psikoloji Yüksek Lisans öğrencisi Funda Doğan tarafından, Psikoloji Bölümü öğretim üyelerinden Doç. Dr. Deniz Canel Çınarbaş danışmanlığında yürütülmektedir. Çalışmanın amacı, travmatik yaşam olayları ile prososyal davranışlar (olumlu sosyal davranışlar) arasındaki ilişkiyi ve bu ilişkide rol alan bazı değişkenleri incelemektir. Katılım gönüllülük esasına dayanmaktadır. Araştırmada sizden kimlik belirleyici hiç bir bilgi istenmeyecek olup, edinilen bilgiler sadece araştırmacılar tarafından değerlendirilip, bilimsel yayında kullanılacaktır.

Araştırma sonuçlarının sağlıklı olabilmesi için yanıtlarınızın samimi olması son derece önemlidir. Doğru ve ya yanlış cevap yoktur. Kendinize en yakın hissettiğiniz ve ya düşündüğünüz cevabı işaretlemeniz yeterli olacaktır.

Katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz, çalışmayı yarıda bırakmakta serbestsiniz.

Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz.

Çalışma hakkında daha fazla bilgi almak için aşağıdaki iletişim bilgilerini kullanabilirsiniz:

Doç. Dr. Deniz Canel Çınarbaş: tel: 0 312 210 3138

:email: dcanel@metu.edu.tr

Araştırmacı Funda Doğan: email: e199117@metu.edu.tr

Bu alıřmaya tamamen gnll olarak katlıyorum ve istediđim zaman alıřma kapsamından ıkabileceđimi biliyorum. Ve verdiđim bilgilerin bilimsel amalı yayınlarda kullanılmasını kabul ediyorum.

Ad-Soyad

Tarih

İmza

Alınan

Ders

.././....

B. Demographic Questions Form

Demografik Bilgi Formu

Cinsiyetiniz:

- Kadın
Erkek

Yaşınız:

En son mezun olduğunuz okul:

- İlkokul
Ortaokul
Lise
Lisans
Yüksek Lisans
Doktora

Öğrencilik durumunuzu belirtiniz:

- Lise öğrencisi
Lisans Öğrencisi
Yüksek Lisans Öğrencisi
Doktora Öğrencisi
Öğrenci Değilim

En uzun süre yaşadığınız yer :

- Köy
Kasaba
Şehir
Büyükşehir

Ailenizin toplam aylık geliri ne kadar ?

- 1000 TL ve altı
1001 TL -2000 TL
2001 TL -3000 TL
3001 TL- 4000 TL
4001 TL- 5000 TL
5001 TL ve üstü

C. Prosocial Tendencies Measure

Prososyal Davranış ölçeği

Aşağıda sizi tanımlayabilen ya da tanımlayamayan bazı ifadeler bulunmaktadır. Lütfen her bir ifadenin sizi ne kadar tanımladığını seçeneklerin altındaki sayıları ifadelerin başındaki boşluğa yazarak gösteriniz.

1 Beni hiç tanımlamıyor

2 Beni biraz tanımlıyor

3 Beni bir ölçüde tanımlıyor

4 Beni iyi tanımlıyor

5 Beni çok iyi tanımlıyor

___ 1. Başkalarına en iyi yardımı birileri beni izlerken yapabilirim.

___ 2. Problemi olan birine yardım ettiğimde çok mutlu olurum.

___ 3. Çevremde başkaları olduğu zaman, ihtiyacı olanlara yardım etmek benim için daha kolaydır.

___ 4. Benim düşünceme göre başkalarına yardım etmenin en iyi tarafı, iyi biri olarak tanınmamı sağlamasıdır.

___ 5. En çok etrafta başka insanlar varken yardım ederim.

___ 6. Gerçek bir kriz ya da gereksinim içinde olan insanlara yardım etme eğilimindeyimdir.

___ 7. İnsanlar benden yardım istedikleri zaman tereddüt etmem.

___ 8. Para bağıışı yaptığım zaman ismimin bilinmemesini tercih ederim.

___ 9. Kendine kötü bir şekilde zarar vermiş insanlara yardım etme eğilimindeyimdir.

___ 10. Para ve mal bağıışı yapanlara vergi indirimi uygulandığında bağıışların artacağına inanırım.

___ 11. İhtiyacı olanlara en çok yardımı kimin yardım ettiğini bilmedikleri zaman yapma eğilimindeyim.

___ 12. Özellikle duygusal olarak sıkıntılı insanlara yardım etme eğilimindeyimdir.

___ 13. Ben odak noktası olduğumda başkalarına en iyi yardımı yaparım.

___ 14. Başkaları kötü bir durumda olduğu zaman benim için yardım etmek kolay.

___ 15. Kimin yardım ettiği bilinmediğinde daha fazla yardım ederim.

___ 16. Hayırseverliğe harcadığım zaman ve emek için daha fazla hatırlanmam gerektiğine inanıyorum.

___ 17. Ortam oldukça duygusal ise başkalarına en iyi yardımla karşılık veririm.

___ 18. İnsanların yardım isteklerini karşılamada asla tereddüt etmem.

___ 19. En iyi yardımın bilinmeksizin yapılan yardım olduğuna inanıyorum.

___ 20. Hayırsever olmanın en iyi yanlarından biri toplumda saygınlığımı artırmasıdır.

___ 21. Duygusal ortamlar bende muhtaçlara yardım etme isteği uyandırır.

___ 22. Sık sık isimsiz bağıışlar yapmak kendimi iyi hissetmemi sağlıyor.

___ 23. Eğer birilerine yardım edersem gelecekte onlar da bana yardım etmeliler diye düşünürüm.

D. The Posttraumatic Stress Diagnostic Scale

Travma Sonrası Stres Tanı Ölçeği

1. Bölüm

Birçok kişinin başından, hayatının herhangi bir döneminde, oldukça stresli ve travmatik bir olay geçmiş ya da böyle bir olaya tanık olmuştur. Aşağıda belirtilen olaylar içinde, **başınızdan geçen ya da tanık olduğunuz** olayların hepsini yanındaki kutuyu işaretleyerek belirtiniz, **birden fazla 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 cinsel olmayan bir saldırıya maruz kalma (örneğin, saldırıya uğrayıp soyulma, fiziksel bir saldırıya maruz kalma, silahlı saldırı, bıçaklanma ya da silahla rehin alınma)	
(4)	Tanımadığınız biri tarafından cinsel olmayan bir saldırıya maruz kalma (örneğin, saldırıya uğrayıp soyulma, fiziksel bir saldırıya maruz kalma, silahlı saldırı, bıçaklanma ya da silahla rehin alınma gibi)	
(5)	Aile üyelerinden biri ya da tanıdığınız bir kişi tarafından cinsel bir saldırıya maruz kalma (örneğin, tecavüz ya da tecavüze teşebbüs gibi)	
(6)	Tanımadığınız bir kişi tarafından cinsel bir saldırıya maruz kalma (örneğin, tecavüz ya da tecavüze teşebbüs gibi)	
(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 gibi)	
(9)	Hapsedilme (örneğin, cezaevine düşme, savaş esiri olma, rehin alınma gibi)	
(10)	İşkenceye maruz kalma	
(11)	Hayatı tehdit eden bir hastalık	
(12)	Sevilen ya da yakın birinin beklenmedik ölümü	
(13)	Bunların dışında bir travmatik olay	
(14)	13. Maddeyi işaretlediyseniz aşağıda bu travmatik olayı belirtiniz: _____ _____ _____ _____	

YUKARIDAKİ MADDELERDEN HERHANGİ BİRİNİ İŞARETLEDİYSENİZ, SORULARI YANITLAMAYA DEVAM EDİN.

HİÇBİR MADDEYİ İŞARETLEMEDİYSENİZ, DEVAM ETMEYİN.

2. Bölüm

(15) 1. Bölümde **birden fazla** sayıda travmatik olay işaretlediyseniz, *canınızı en çok sıkan, sizi en rahatsız eden* olayın yanındaki kutuyu işaretleyiniz. Eğer, 1. Bölümde **yalnızca bir** travmatik olayı işaretlediyseniz, aşağıda da aynı olayı işaretleyiniz.

(a)	Kaza (araba ya da iş kazası, gibi)	
(b)	Doğal afet	
(c)	Aile üyelerinden biri ya da tanıdığımız bir kişi tarafından cinsel olmayan bir saldırıya maruz kalma	
(d)	Tanımadığımız biri tarafından cinsel olmayan bir saldırıya maruz kalma	
(e)	Aile üyelerinden biri ya da tanıdığımız bir kişi tarafından cinsel bir saldırıya maruz kalma	
(f)	Tanımadığımız bir kişi tarafından cinsel bir saldırıya maruz kalma	
(g)	Savaş	
(h)	18 yaşından daha küçük olduğunuz bir dönemde kendinizden 5 ya da daha büyük yaşta biriyle cinsel temas	
(i)	Hapsedilme	
(j)	İşkenceye maruz kalma	
(k)	Hayatı tehdit eden bir hastalık	
(l)	Sevilen ya da yakın birinin beklenmedik ölümü	
(m)	Bunların dışında bir olay	
(n)	Aşağıda boş bırakılan yerde <u>yukarıda işaretlemiş olduğunuz</u> travmatik olayı kısaca anlatınız. _____ _____ _____ _____ _____ _____ _____ _____ _____	

Anlattığınız bu olay hakkında aşağıda birkaç soru verilmiştir. Bu soruları yanıtlayınız:

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

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

3. Bölüm

Aşağıda, insanların bazen bir travmatik olayın ardından yaşadığı bazı sorunlar belirtilmiştir. Her maddeyi dikkatlice okuyun ve **GECTİĞİMİZ AY İÇİNDE** bu sorunun sizi ne sıklıkta rahatsız ettiğini en iyi ifade ettiğini düşündüğünüz sayıyı (0, 1, 2 ya da 3) daire içine alın.

Örneğin, söz ettiğiniz olay geçtiğimiz ay içinde aşağıda verilen sıkıntılar açısından sizi yalnızca bir kez rahatsız ettiyse 0'ı; haftada bir kez rahatsız ettiyse 1 işaretleyin. Aşağıda belirtilen olayla ilgili her sıkıntıyı **15. maddede belirttiğiniz travmatik olay açısından** değerlendiriniz.

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

(23)	Bu travmatik olay hakkında, istemediğiniz halde aklınıza rahatsız edici düşünceler ya da imgelerin gelmesi	0	1	2	3
(24)	Bu travmatik olayla ilgili kötü rüyalar ya da kabuslar görme	0	1	2	3
(25)	Bu travmatik olayı yeniden yaşama, sanki tekrar oluyormuş gibi hissetme ya da öyle davranma	0	1	2	3
(26)	Bu travmatik olayı hatırladığınızda duygusal olarak altüst olduğunuzu hissetme (örneğin, korku, öfke, üzüntü, suçluluk vb. gibi duygular yaşama)	0	1	2	3
(27)	Bu travmatik olayı hatırladığınızda vücudunuzda fiziksel tepkiler meydana gelmesi (örneğin, ter boşalması, kalbin hızlı çarpması)	0	1	2	3

(28)	Bu travmatik olayı düşünmemeye, hakkında konuşmamaya ya da hissetmemeye çalışma	0	1	2	3
(29)	Size bu travmatik olayı hatırlatan etkinliklerden, kişilerden ya da yerlerden kaçınmaya çalışma	0	1	2	3
(30)	Bu travmatik olayın önem taşıyan bir bölümünü hatırlayamama	0	1	2	3
(31)	Önemli etkinliklere çok daha az sıklıkta katılma ya da bu etkinliklere çok daha az ilgi duyma	0	1	2	3
(32)	Çevrenizdeki insanlarla aranızda bir mesafe hissetme ya da onlardan koptuğunuz duygusuna kapılma	0	1	2	3
(33)	Duygusal açıdan kendinizi donuk, uyuşuk hissetme (örneğin, ağlayamama ya da sevecen duygular yaşayamama)	0	1	2	3
(34)	Gelecekle ilgili planlarınızın ya da umutlarınızın gerçekleşmeyeceği duygusuna kapılma (örneğin, bir meslek hayatınızın olmayacağı, evlenmeyeceğiniz, çocuğunuzun olmayacağı ya da ömrünüzün uzun olmayacağı duygusu)	0	1	2	3
(35)	Uykuya dalma ya da uyumada zorluklar yaşama	0	1	2	3
(36)	Çabuk sinirlenme ya da öfke nöbetleri geçirme	0	1	2	3
(37)	Düşüncenizi ya da dikkatinizi belli bir noktada toplamada sıkıntı yaşama (örneğin, bir konuşma sırasında konuyu kaçırma, televizyondaki bir öyküyü takip edememe, okuduğunuz şeyi unutma)	0	1	2	3
(38)	Aşırı derecede tetikte olma (örneğin, çevrenizde kimin olduğunu kontrol etme, sırtınız bir kapıya dönük olduğunda rahatsız olma,vb.)	0	1	2	3
(39)	Diken üstünde olma ya da kolayca irkilme (örneğin, birisi peşinizden yürüdüğünde)	0	1	2	3
(40)	Yukarıda belirttiğiniz sorunları ne kadar zamandır yaşıyorsunuz? (<u>YALNIZCA BİR TANESİNİ</u> daire içine alınız) a. Bir aydan daha az b. 1-3 ay arası c. 3 aydan daha fazla				
(41)	Bu sorunlar söz konusu travmatik olaydan ne kadar sonra başladı? (<u>YALNIZCA BİR TANESİNİ</u> daire içine alınız) a. 6 aydan daha az b. 6 ay ya da daha fazla				

E. Post Traumatic Growth Inventory

Travma Sonrası Büyüme Ölçeği

Sizi en çok etkilediğini belirttiğiniz bu olaya bağlı olarak aşağıdaki konular hakkında yaşadığınız değişikliklerin derecesini aşağıdaki ölçeği kullanarak lütfen belirtiniz.

0=Yaşadığım krizden dolayı bu değişimi hiç yaşamadım.

1=Yaşadığım krizden dolayı bu değişimi çok az yaşadım.

2=Yaşadığım krizden dolayı bu değişimi biraz yaşadım.

3=Yaşadığım krizden dolayı bu değişimi orta düzeyde yaşadım.

4=Yaşadığım krizden dolayı bu değişimi oldukça fazla yaşadım.

5=Yaşadığım krizden dolayı bu değişimi çok fazla yaşadım.

ÖRNEĞİN, duyguları paylaşma konusunda; hiç değişim yaşamadıysanız 0'ı, orta düzeyde bir değişim yaşadıysanız 3'ü, çok fazla değişim yaşadıysanız 5'i işaretleyiniz.

	Hiç Yaşamadım					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	0	1	2	3	4	5

hissetmeye başladım.						
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. Hastalığımın 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. Düşündüğümde 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

F. Empathic Tendency Scale

Empati Ölçeği

AÇIKLAMA: Aşağıda 20 cümle bulunmaktadır. Bir cümledeki ifadeyi kendinize **tamamen uygun** bulacağınız düşünürseniz **5'e**; **oldukça uygun** bulacağınızı düşünürseniz **4'e**; **oldukça aykırı** bulacağınızı düşünürseniz **2'ye**; **tamamen aykırı** bulacağınızı düşünürseniz **1'e**; eğer bir cümleye ilişkin olarak **kararsızlık belirteceksiniz 3'e çarpı işareti** koyunuz.

1	Çok sayıda dostum var	1	2	3	4	5
2	Film seyrederken bazen gözlerim yaşarır	1	2	3	4	5
3	Sıklıkla kendimi yalnız hissederim	1	2	3	4	5
4	Bana dertlerini anlatanlar yanımdan rahatlamış olarak ayrılırlar	1	2	3	4	5
5	Başkalarının problemleri, beni kendi problemlerim kadar ilgilendirir	1	2	3	4	5
6	Duygularımı başkalarına iletmekte güçlük çekerim	1	2	3	4	5
7	İnsanların film seyrederken ağlamaları tuhafıma gider	1	2	3	4	5
8	Birisiyle Tartışırken bazen dikkatim, Onun söylediklerinden çok vereceğim cevap üzerine yoğunlaşır	1	2	3	4	5
9	Çevremde çok sevilen bir insanım	1	2	3	4	5
10	Televizyondaki filmler mutlu sona ulaşınca rahatlarım	1	2	3	4	5
11	Düşüncelerimi başkalarına iletmekte güçlük çektiğim olur	1	2	3	4	5
12	İnsanların çoğu bencildir	1	2	3	4	5
13	Sinirli bir insanım	1	2	3	4	5
14	Genellikle insanlara güvenirim	1	2	3	4	5
15	İnsanlar beni tam olarak anlayamıyorlar	1	2	3	4	5
16	Girişken bir insanım	1	2	3	4	5
17	Bir yakınıma derdimi anlatmak beni rahatlatır	1	2	3	4	5
18	Genellikle hayatımdan memnunum	1	2	3	4	5
19	Yakınlarım bana sık sık dertlerini anlatırlar	1	2	3	4	5
20	Genellikle keyfim yerindedir.	1	2	3	4	5

Appendix G: Ethics Committee Approval

G. Turkish Summary

1. Giriş

Bu çalışma travma sonrası stres belirtileri ile prososyal davranış eğilimi arasındaki ilişkide, travma sonrası büyümenin aracı rolünü araştırmak amacıyla yürütülmüştür.

1.1. Prososyal Davranış

Prososyal davranış tanım olarak diğer kişi ya da kişilere fayda sağlamayı amaç edinen davranıştır. Prososyal davranış ihtiyacı olan bir kişiye yardım etmek gibi o an gelişen bir davranış olabilmekle birlikte, gönüllülük gibi uzun süreli ve planlı davranışları da kapsar.

Prososyal davranışı açıklamak için birçok yaklaşım fikir öne sürmüştür. Prososyal davranışı açıklamak için öğrenme mekanizmasını temel alan yaklaşımlar, gelişimsel faktörleri ve sosyalleşme süreçlerinin etkisini prososyal davranışı açıklamak için kullanmışlardır. Örnek olarak, önceki çalışmalar model almanın (Coates, Pusser, & Goodman, 1976) ve olumlu pekiştirecin (Rushton & Teachman, 1978) prososyal davranış üzerinde ki etkisini göstermiştir.

Prososyal davranışı uyarılma ve duygu üzerinden açıklayan yaklaşımlar prososyal davranışın ortaya çıkışında duygunun rolüne vurgu yapar. Empati-özgecilik hipotezi prososyal davranışı özgecilik üzerinden açıklamaya çalışır. Bu yaklaşım, kişinin ihtiyaç halindeki bir kişiye karşı empati geliştirdiği takdirde, özgeci bir motivasyonla yardım etme davranışı göstereceğini varsayar (Batson, Duncan, Ackerman, Buckley, & Birch, 1981). Batson (2002) kişinin özgeci davranış gösterirken, kişinin kendi stresinin azalması gibi içsel ve sosyal ödüller gibi dışsal kazanımlarının olabileceğini ifade eder.

Sosyal ve kişisel standartları temel alan yaklaşımlar normların kişiyi prososyal davranışa yönlendirebileceğini ifade eder. Bulgular, kişinin, olumlu bir kendilik imajına sahip olmak (Schwartz & Howard, 1982 alıntılan Penner ve ark., 2005, s. 268) ya da kendi kişisel ihtiyaçlarını karşılamak (Omote & Snyder, 1995) gibi nedenlerle prososyal davranış gösterebileceğini belirtir.

Ayrıca prososyal davranış evrim teorisi aracılığı ile de açıklanabilmektedir. Bu yaklaşıma göre, prososyal davranış eğilimi bu davranışı gösteren kişilerin genlerini diğer nesle geçirme başarısının yüksek oluşu ile açıklanmaktadır. Bu yaklaşıma göre kişiler genlerini diğer nesle geçirme ihtimalini artıracak şekilde yardım etme davranışı gösterebilmektedir (Penner et al., 2005). Örnek olarak Burnstein, Crandall ve Kitayama (1994) ölüm kalım durumlarında kişilerin yakın akrabalarına uzak akrabalarına daha çok yardım ettiklerini bulmuştur.

Araştırmacılar, durumsal faktörleri kişilerin ne zaman daha çok prososyal davranış gösterdiğini saptamak amacıyla incelemiştir. Bulgular kişilerin ortamda başka yardım edecek kişi olmadığı zaman (Latane & Darley, 1968), yardım ihtiyacı net olduğu zaman (Clark & Word, 1974) ve acil durum olduğu zaman (Shotland & Huston, 1979) daha çok yardım ettiğini göstermiştir.

Araştırmacılar genellikle prososyal davranışı açıklarken olumlu faktörleri incelemiştir. Örnek olarak, sosyalleşme süreci (Coates et al., 1976), benliği geliştirmek gibi kişisel ihtiyaçlar (Omote & Snyder, 1995) ya da empatiyi prososyal davranışın kaynağı olabilecek faktörler olarak incelemiştir. Son zamanlarda travmatik yaşam olaylarının prososyal davranış gösterme eğilimini artırabileceği yönünde öneriler sunulmuştur (Vollhardt, 2009). Vollhardt (2009) travma yaşayan kişinin daha çok empati, daha güçlü hissetme gibi değişimler deneyimleyebileceğini ifade etmiştir. Ve bu değişimler sayesinde kişinin daha çok prososyal davranış gösterebileceğini belirtmiştir.

Özet olarak, prososyal davranış ile ilgili daha çok olumlu faktörler araştırma konusu yapılmaktadır. Aynı eğilim travma çalışmaları içinde mevcuttur. Son zamanlarda olumlu faktörleri ele alma eğilimi gözlemlense de travma ile alakalı literatür daha çok olumsuz faktörlerin incelenmesinden oluşmaktadır. ilerleyen bölümlerde, travma, travma sonrası stres ve travma sonrası büyüme incelenecektir.

1.2.Travma ile ilgili Genel Bakış

Travma kelimesinin bugünkü anlamı tarihsel süreçler içerisinde gelişmiştir. Herman (1997) bu süreci üç temel döneme bölerek özetler. Tarihsel süreç içerisinde, üç çeşit psikolojik travma ilgi çekerek ele alınmıştır. İlk olarak *histeri* önemli bir araştırma konusu olarak ele alınmış ve travmatik olaya bağlı olarak gelişen değişik bir bilinç durumu olarak ele alınmıştır. İkinci olarak, 1. Dünya Savaşı'na çok sayıda

insanın maruz kalması neticesinde, *savaş bunalımı* olarak adlandırılan savaştan kaynaklı ruhsal çöküntü hali arařtırmaların konusu olmuřtur. Savaş karřıtı oluřan gruplar sayesinde, savaş bunalımının tedavisi konusu da arařtırma konusu olmuřtur. Artan bu farkındalıklar neticesinde travma sonrası stres bozukluęu ilk defa resmi olarak Mental Bozuklukların Tanısal ve Sayımsal El Kitabı'nda (DSM) tanımlanmıřtır. Son olarak cinsel ve aile ii řiddet konusunda travma belirtileri ilgi ekmiřtir. Ayrıca cinsel taciz ve aile ii travma ile savaşın getirdięi bunalım arasındaki belirtilerin benzerlięi bu dönemde dikkat ekmiřtir. (Hermann, 1997).

1.2.1 Travmatik Olaylar

Travmatik olaylar savaş, sevilen birinin kaybı gibi birok yařam olayını kapsar. DSM IV'e gre, travmatik olayın 2 zellięi vardır. Birinci olarak, travmatik olay lm ya da lm tehdidi ile karřılařma, ciddi bir yaralanma veya kendisinin ya da bařkalarının fiziksel btnlęne bir tehdit olayını yařamıř, byle bir olaya tanık olmuř ya da byle bir olayla karřı karřıya gelmiř olmayı kapsar. İkinci olarak, kiřinin ařırı korku, aresizlik ya da dehřete dřme tepkileri vermesi beklenir. DSM 5'de ikinci kısım kaldırılmıřtır.

1.3.Travma Sonrası Stres Semptomları

Travmanın etkisi kiřiden kiřiye deęiřir. Bazı kiřiler travma sonrası stres semptomları gsterirler. DSM IV'e gre, travma sonrası stres semptomları 3 ana kategori altında yer alır. Bu  temel belirti grubu; yeniden yařama, kaınma ve irkilmedir. Travma sonrası stres bozukluęu (TSSB) tanısı iin kiřinin 5 belirtiden oluřan yeniden yařama belirti gurubundan en az 1 tane yařaması beklenir. Bu grupta yer alan belirtiler; kiřinin travmatik olayı elinde olmadan tekrar tekrar anımsaması, olayla ilgili sıkıntı verici ryalar grmesi, olayı yeniden yařıyor gibi hissetmesi, olayı hatırlatan durumlarla karřılařtıęında yoęun psikolojik sıkıntı duyması veya fiziksel tepkiler yařamasıdır. 7 maddeden oluřan kaınma kategorisinden en az 3 tane yařaması gerekir. Bu grupta yer alan belirtiler; kiřinin olayla ilgili dřnce, duygu ve olayı hatırlatan durumlardan kaınması, olayın bazı blmlerini hatırlayamaması, duygularında donukluk, insanlardan uzaklařma, daha nce sevdięi etkinliklere karřı ilgisinde azalma ve bir geleceęi kalmadıęı duygusunu yařamasıdır. Beř maddeden oluřan irkilme belirti gurubundan en az 2 tane yařaması beklenmektedir. Bu grupta yer alan belirtiler; kiřinin uykuya dalmada ya da uykuyu srdrmede glk

çekmesi, çabuk sinirlenme ve öfke hali, konsantre olmada güçlük, aşırı irkilme tepkileri vermesi, ve kendini tetikte hissetmesidir. DSM 5’de bu 3 belirti gurubu 4 belirti grubuna dönüştürülmüştür.

DSM’in tanı için koyduğu kısıtlılık bazı araştırmacıları TSSB tanısı olmadan bu konuyu çalışmaya yönlendirmiştir. Travma sonrası stres semptomatolojisi (Muller, Sicoli ve Lemieux, 2000), eşik altı TSSB (Marshall ve ark., 2001) gibi terimler literatürde TSSB tanısı olmadan TSSB belirtilerini çalışmak için kullanılan terimlerden bazılarıdır. Bu çalışmada da, yeniden yaşama, kaçınma ve irkilmenin toplam puanları kullanılmıştır.

1.4. Travma Sonrası Büyüme

Son zamanlarda travma sonrası gelişen olumlu değişimlerle ilgili çalışmalar yapılmaktadır. Travma sonrası deneyimlenen olumlu gelişme Travma Sonrası Büyüme (TSB) olarak adlandırılır. Travma sonrası büyüme sadece travma sonrası iyileşmeyi değil, travma sonrası gelişmeyi kapsar. Yani kişi travma sonrası öncesine göre psikolojik kapasitesinde gelişim gösterir. Olumlu değişim kişinin benliğinde, kişiler arası ilişkilerinde ve dünya ile ilgili görüşlerinde olabilir (Tedeschi ve ark., 1998)

Kişi kendilik algısında değişim yaşayabilir. Abraído-Lanza, Guier, ve Colón (1998) kronik bir rahatsızlık sonucu kişilerin kendilerini daha güçlü olarak algıladıklarını bulmuştur. Ayrıca kişi sarsıcı yaşam olayı sonunda savunmasızlığını görür. Bu durum kişinin kendisini daha güçlü olarak hissetmesiyle birleşince, kişi daha çok sosyal destek arayarak daha yakın ilişkiler kurabilir (Tedeschi ve ark., 1998).

Ayrıca kişi kişilerarası ilişkilerinde değişim gösterebilir. Kişi sarsıcı bir yaşam olayı sonucunda kendisini daha çok açabilir, daha çok duygu ifadesinde bulunabilir ve daha yakın ilişkiler kurabilir. Ayrıca kişinin savunmasızlığının farkında olması daha çok empati yapabilmesine, şefkat duymasına ve yardım davranış göstermesine olanak tanıyabilir (Tedeschi ve ark., 1998).

Son olarak kişi dünya ile ilişkili fikirlerinde değişim yaşayabilir. Kişi hayatını ikinci bir şans olarak düşünmeye başlayabilir. Kişi hayata karşı daha çok şükran hissedebilir (Cordova, Cunningham, Carlson, ve Andrykowski, 2001). Kişi

varoluşsal sorular sorup, hayatın anlamını bulmaya çalışabilir (Tedeschi ve ark., 1998). Kişi Tanrı'nın varlığına daha çok hissetme gibi manevi değişimler yaşayabilir.

1.4.1. Travma Sonrası Stres ile Travma Sonrası Büyüme Arasında ki İlişki

Araştırmalar travma sonrası stres bozukluğu (TSSB) semptomları ile travma sonrası büyüme (TSB) arasında hem pozitif (Cadell, Regehr ve Hemsworth, 2003) hem negatif (Sawyer, Ayers ve Field, 2010) ilişki bulmuştur. Zoellner ve Maercker (2006) bulgular arasında ki bu uyumsuzluğun TSB'in ölçme şekliyle alakalı olabileceğini belirtmiştir. TSB'in travma sonrası büyüme ölçeği gibi standart ölçeklerle ölçüldüğü takdirde pozitif ya da anlamsız bir ilişki elde edildiğini ifade etmiştir. Ayrıca TSB görüşme formatında ölçüldüğü takdirde negatif bir ilişkinin gözlemlendiğini belirtmiştir.

Joseph ve Linley (2006) TSB ve TSSB semptomları arasında ki olumlu ilişkiyi yorumlamıştır. Travmatik olay kişinin hayatla ve kendisi ile ilgili varsayımlarını sarstığı için TSSB'in travma sonrası bir anlam arayışını ve bu varsayımların tekrar inşa edilme sürecini ifade edebileceğini belirtmiştir. Şuanki çalışmada TSSB belirtileri travmanın kişi üzerindeki devam eden etkisini ölçmek için kullanılmıştır.

1.5. Empati

Empatinin tanımıyla ilgili literatürde farklılıklar vardır (Duan ve Hill, 1996). Son zamanlarda genel kabul gören tanımı "kişinin karşısındaki kişinin duygusal durumunu ve içeriğini anlaması ve paylaşabilmesi" şeklinde ifade edilebilir (Cohen ve Strayer, 1996, sayfa, 988). Bu tanım empatinin hem duygusal hem bilişsel tanımını içerir.

Ayrıca, empatinin ölçümü ile ilgili de literatürde farklılıklar mevcuttur. Bazı araştırmacılar empatiyi bir kişilik özelliği olarak ele alırken (Hogan, 1969), bazı araştırmacılar empatiyi duruma özgü bilişsel-duygusal bir durum olarak ele alır (Barret-Lennard, 1962). Ayrıca bazı araştırmacılar empatinin terapi süreci içerisinde deneyimlenmesi ile ilgilenir ve empatiyi çok kademeli deneyimlenen bir süreç olarak ele alır (Rogers, 1975).

Empati sosyal psikoloji literatüründe genel olarak prososyal ve anti sosyal davranışla ilişkili olarak ele alınır. Empatinin prososyal davranışı teşvik ettiği (Batson, 2002) ve saldırganlığı önlediği (Eisenberg ve Eggum, 2010) bulunmuştur.

Özet olarak, empati prososyal davranışla ilişkili olarak sıkça ele alınan bir değişkendir (Eisenberg ve Eggum, 2010). Empatiye ek olarak son zamanlarda travmaya maruz kalmanın da prososyal davranışla ilişkili olabileceği literatürde ele alınmaktadır (Vollhardt, 2009). Devam eden bölümde travma sonrası stres belirtileri, travma sonrası büyüme, empati ve prososyal davranış arasındaki ilişki ele alınacaktır.

1.6. Travma Sonrası Stres Belirtileri, Travma Sonrası Büyüme, Empati ve Prososyal Davranış arasında ki İlişki

Literatürdeki genel kanı, prososyal davranışın olumlu yaşam deneyimlerinden, saldırganlık gibi uyumsuz davranışların ise olumsuz yaşam olaylarından kaynaklandığıdır. Son zamanlarda gelişen kanı, buna ek olarak, başka eğilimlerinde olabileceğidir (Vollhardt, 2009). Vollhardt (2009) kişinin travması sonrası bir takım psikolojik değişimler gösterdiği takdirde daha çok prososyal davranış gösterebileceğini önermiştir. Travma sonrası büyüme Vollhardt (2009) tarafından önerilen değişimlerden biridir.

Önceki çalışmalar travma ve prososyal davranış arasında bir ilişki olduğunu önermektedir (Frazier ve ark., 2012; Vollhardt ve Staub, 2011). Bazı çalışmalar travma yaşayan kişilerin yaşamayanlara oranda daha çok prososyal davranış gösterdiğini bulmuştur (Frazier ve ark., 2012). Ancak Trull (2014) iki grup arasında fark bulamamıştır ve düşük prososyal davranış gösteren kişilerin daha az travma sonrası büyüme (TSB) gösterdiğini bulmuştur ve arada fark bulamamasını kişilerin TSB düzeylerinde ki farklılıktan kaynaklanabileceğini belirtmiştir.

Travmaya maruz kalma ve prososyal davranış arasındaki ilişkide aracı rol oynayabilecek faktörler literatürde incelenmiştir. Travma sonrası büyüme bu faktörlerden biridir (Vollhardt, 2009). Vollhardt (2009) hayatın anlamının prososyal davranışı motive edici bir faktör olabileceğini ve travma sonrası büyümenin hayatın anlamıyla ilişkili olabileceğini iddia etmiştir. Ampirik araştırmalar iki değişken arasında anlamlı ve pozitif bir ilişki öngörmektedir (Trull, 2014; El-Gabalawy, 2010).

Empati prososyal davranış ile ilişkili birçok çalışmada araştırılmıştır (Eisenberg ve Eggum, 2010; Toi ve Batson, 1982). Birkaç çalışma travmaya maruz kalma ile empati arasındaki ilişkiyi incelemiştir ve travmaya maruz kalanların benzer şekilde travmatize olmuş kişiye karşı daha çok empati gösterdiğini ifade etmiştir

(Barnett, Tetreault, Esper ve Bristow, 1986; Vollhardt, 2009). Ancak bir kaç çalışmayla aradaki ilişkiyi saptamak güçtür. Empati ile prososyal davranış arasında güçlü bir ilişki olduğu için (Toi ve Batson, 1982) çalışmaya kontrol değişkeni olarak dahil edilmiştir.

Özet olarak, çalışmalar travma ile prososyal davranış arasında bir ilişkiyi öngörmektedir. Ayrıca travma sonrası büyümenin iki değişten arasında aracı rol oynadığı varsayılmaktadır (Vollhardt, 2009). Ancak TSB'in aracı rolünü araştıran ampirik bir çalışma bulunmamaktadır. Bu çalışmanın amacı travma sonra stres ile prososyal davranış eğilimi arasında ki ilişkide travma sonrası büyümenin aracı rolünü araştırmaktır.

1.7. Çalışmanın Hipotezleri

1) Travma yaşayan katılımcılar travma yaşamayan katılımcılardan daha yüksek prososyal davranış eğilimi gösterecektir.

2) Katılımcıların empatik eğilim skorlarını kontrol ettikten sonra, travma sonrası büyüme, TSSB belirtileri ile prososyal davranış eğilimi arasında ki ilişkide aracı rol oynayacaktır.

2. YÖNTEM

2.1. Katılımcılar

Sadece son 5 yıl içerisinde travma yaşamış kişiler travma yaşayan katılımcılar grubuna dahil edilmiştir. Çalışmada 150 kişi travma yaşayan ve 58 travma yaşamayan kişi yer almıştır. Travma yaşayan katılımcıların 89'u (% 59.3) kadın ve 61'i (% 40.7) erkektir. Travma yaşamayan katılımcıların 34'ü (% 58.6) kadın ve 24'ü (% 41.4) erkektir. Katılımcıların yaşı 19 ve 35 arasında değişmektedir.

2.2. Ölçüm Araçları

Katılımcılara Demografik Bilgi Formu, Prososyal Davranış Eğilimi Ölçeği, Travma Sonrası Stres Tanı Ölçeği, Travma Sonrası Büyüme Envanteri ve Empatik Eğilim Ölçeği sunulmuştur.

2.2.1. Prososyal Eğilim Ölçeği

23 maddeden oluşan ölçek Carlo ve Randal (2002) tarafından prososyal davranış eğilimini üniversite öğrencisi örnekleminde ölçmek amacıyla geliştirilmiştir. Kumru, Carlo, ve Edwards (2004) 11-21 yaş arası gençler için Türkçe'ye adapte etmiştir. Daha sonra, Yıldız, Boz ve Yıldırım (2012) ölçeği

üniversite öğrenci örneklemeine adapte etmiştir. Ölçeğin iç tutarlılık katsayısı mevcut çalışmada .71 olarak bulunmuştur.

2.2.2. Travma Sonrası Stres Tanı Ölçeği

Elli maddeden oluşan Travma Sonrası Stres Tanı Ölçeği (PDS) travma sonrası stres bozukluğunu belirlemek amacıyla geliştirilmiştir (Foa, Cashman, Jaycox, ve Perry, 1997). Ölçek Türkçe'ye Işıklı (2006) tarafından adapte edilmiştir. Bu çalışmada, Travma Sonrası Stres Tanı Ölçeği yaşanan travmatik olayın türü ve olaya bağlı yaşanan stres belirtilerin şiddetini saptamak amacıyla kullanılmıştır. Ölçeğin iç tutarlılık katsayısı mevcut çalışmada .94 olarak bulunmuştur.

2.2.3. Travma Sonrası Büyüme Ölçeği

Yirmi bir maddeden oluşan bu ölçek travmatik yaşantılar sonrası bireylerde görülebilecek olumlu dönüşümleri değerlendirmek üzere Tedeschi ve Calhoun (1996) tarafından geliştirilmiştir. Bu ölçek, önce Kılıç (2005) ve daha sonra bir takım değişiklikler yapılarak Dirik (2006) tarafından Türkçe'ye çevrilmiştir. Bu çalışmada travma sonrası görülen olumlu dönüşümleri değerlendirebilmek amacıyla Dirik'in (2006) çevirisi kullanılmıştır. On dördüncü maddenin diğer maddelerle karşılaştırıldığında madde toplam korelasyonu (.35) düşük olduğu için, bu madde çıkarılmıştır. Ölçeğin iç tutarlılık katsayısı mevcut çalışmada .94 olarak bulunmuştur.

2.2.4. Empatik Eğilim Ölçeği

20 maddeden oluşan ölçek, Dökmen (1989) tarafından kişilerin günlük hayatta empati gösterme eğilimini ölçmek amacıyla geliştirilmiştir. Ölçeğin iç tutarlılık katsayısı mevcut çalışmada .74 olarak bulunmuştur.

2.3. Prosedür

ODTÜ Etik Komitesi'nden alınan iznin ardından, www.qualtrics.com sitesinde online bir anket oluşturulmuştur. Analiz için Sosyal Bilimler için İstatistik Paketi (SPSS) kullanılmıştır. Veri temizlemeden sonra, bağımsız grup t testi aracılığı ile travma yaşayan ve yaşamayan grubun prososyal davranış eğilimi arasındaki skor farklılığı incelenmiştir. Değişkenler arasında ki korelasyonlar incelendikten sonra, aracı değişken analizi aracılığı ile travma sonrası büyümenin aracı rolü araştırılmıştır.

3. Bulgular

5 aykırı değer Cook uzaklığı aracılığı ile travma yaşayan grupta saptanmıştır. Böylece, travma yaşayan 145 kişi ve 58 travma yaşamayan katılımcı ile

çalışmaya devam edilmiştir. Katılımcıların rapor ettiği travmatik olaylarla ilgili sıklık ve yüzde tabloları Tablo 3 ve Tablo 4’te verilmiştir.

3.1. Prososyal Davranış Eğilimi Skorları Açısından Travma Yaşayan ve Yaşamayan Grup arası Ortalama Farklılığı

Bağımsız grup t testi prososyal davranış eğilimi skorları açısından travma yaşayan ve yaşamayan grup arası ortalama farklılığı araştırmak amacıyla uygulanmıştır. Sonuçlar iki grup arasında anlamlı bir farklılık olduğunu göstermiştir, $t(86) = 2.50, p = .014, \eta^2 = .06$. Travma yaşayan katılımcılar ($M = 77.90, SD = 8.53$) yaşamayanlardan ($M = 73.93, SD = 10.83$) daha yüksek prososyal davranış eğilimi skorlarına sahiptir.

3.2. Çalışmanın Değişkenleri arasında ki Korelasyonlar

Çalışmanın değişkenleri arasındaki korelasyon değerleri ile ilgili detaylı bilgi Tablo 6’da verilmiştir. TSSB belirtileri travma sonrası büyüme (TSB) ile anlamlı şekilde ilişkili bulunmuştur, $r(143) = .323, p < .01$. Ayrıca travma sonrası büyüme, prososyal davranış eğilimi ile de ilişkili bulunmuştur, $r(143) = .270, p < .01$. Ayrıca empatik eğilim skorları prososyal davranışla anlamlı şekilde pozitif ilişkili bulunurken, $r(143) = .247, p < .01$, TSSB belirtileri ile anlamlı şekilde negatif ilişkili bulunmuştur, $r(143) = -.174, p < .05$.

3.3. Aracı Değişken Analizi

Aracı değişken analizi empatik eğilimin etkisini kontrol ettikten sonra, travma sonrası büyümenin TSSB belirtileri ile prososyal davranış eğilimi arasındaki ilişkide ki aracı rolünü araştırmak amacıyla uygulanmıştır. Analiz, Bootstrapping yoluyla (Preacher & Hayes, 2004) orijinal datadan yeniden elde edilen 5000 yeni örnekleme ve aracı değişken rollerinin güven aralıklarının değerlendirilmesiyle yapılmıştır. Sonuçlar, TSB’in TSSB belirtileri ile prososyal davranış eğilimi arasında aracı bir rol üstlendiğini göstermiştir, 95% CI [.01, 0.11]. Ayrıca, model varyansın % 12’sini açıklamıştır, $F(3, 141) = 6.94, p < .001$. Ayrıntılı bilgi Figür 1’de verilmiştir. Ayrıca, aynı prosedür empati eğilimini kontrol etmeden de uygulanmıştır ve TSB’in aracı rolünün sağlandığı bulunmuştur, , 95% CI [.01, 0.12].

4. Tartışma

Bulgular travma yaşayan katılımcıların yaşamayanlarla karşılaştırılınca daha yüksek prososyal davranış eğilimi gösterdiğini göstermiştir. Bu bulgu literatürdeki

ampirik bulgularla paraleldir (Vollhardt ve Staub, 2011). Vollhardt (2009) bir kişinin travma sonrası bir takım psikolojik değişimler gösterdiği takdirde daha çok prososyal davranış göstereceğini iddia etmiştir. Örnek olarak kişi travmatik bir olaydan sonra ortak kader algısı geliştirebilir ve ihtiyaç halinde ki başkalarını kendisi ile ortak kaderi paylaşıyor gibi algılayabilir. Böylece travmatize olmuş diğer kişileri iç grup olarak algılayıp, daha çok prososyal davranış gösterebilir. Ayrıca kişi kendini daha güçlü olarak hissedebilir ve sosyal olarak daha bütünleşmiş hissedebilir (Vollhardt, 2009). Kişinin kendilik algısındaki ve başkalarıyla olan ilişkisindeki değişimler aynı zamanda travma sonrası büyüme (TSB) literatüründe de araştırılmaktadır. TSB’de travmaya maruz kalma ve prososyal davranış eğilimi arasındaki ilişkide aracı bir rol oynayabilir (Vollhardt, 2009).

Travma sonrası stres bozukluğu (TSSB) belirtileri ile prososyal davranış eğilimi arasında anlamlı bir ilişki bulunamamıştır. Hayes (2009) bir değişkenin diğer bir değişken üzerinde etkisinin zıt etki eden yolları içerebileceğini ifade eder. Mevcut çalışmada TSSB belirtileri empati eğilimi ile negatif ilişkili bulunurken, empati eğilimi prososyal davranış ile pozitif ilişkili bulunmuştur. Ayrıca TSB, prososyal davranış ve TSSB belirtileri ile pozitif ilişkili bulunmuştur. İki değişken arasında ki zıt etki eden yollar anlamlı olmayan ilişkiye neden olmuş olabilir.

TSSB belirtileri ile TSB arasında pozitif bir ilişki elde edilmiştir. Bu sonuç literatürde ki bulgular ile paraleldir (Cadel ve ark., 2003). Tedeschi ve Calhoun (2004) TSB’in travmatik olayın neticesinde değil de, bu olay sonrası kişinin karşılaştığı durumlarla mücadelesi sonucunda olduğunu belirtir. Joseph ve Linley (2006) travmanın kişinin hayata ve kendisine karşı varsayımlarını yıktığını ve TSSB’in kişinin varsayımlarını tekrar inşa etme sürecini yansıtabileceğini ifade eder.

TSB ve prososyal davranış eğilimi arasında pozitif bir ilişki bulunmuştur. Bu bulgu literatür ile paraleldir (Stidham ve ark., 2012). Tedeschi ve ark. (1998) kişinin travma sonrası kendilik algısında ve kişiler arasındaki ilişkilerde değişim gösterebileceğini ifade eder. Kişi sarsıcı bir olaydan sonra kendisini daha güçlü hissedebilir. Ayrıca kişinin savunmasızlığını fark etmesi kendisini daha çok açmasına , daha çok empati yapabilmesine ve başkalarına karşı daha çok merhamet geliştirmesine ve daha yakın ilişkiler kurmasına olanak tanıyabilir (Tedeschi ve ark.,

1998). Yakın ilişkiler ve kişinin kendisini daha güçlü hissetmesi kişiyi başkasına yardım etme konusunda daha istekli bir hale getirebilir.

Aracı değişken analizine göre, empati eğilimini kontrol ettikten sonra, TSB'in TSSB belirtileri ile prososyal davranış eğilimi arasında ki ilişkide aracı rol oynadığı bulunmuştur. Bu model literatürde daha önce araştırılmamıştır. Çalışmalar TSB ile prososyal davranış eğilimi arasında bir ilişki öngörmektedir (Trull, 2014). TSB kişinin psikolojik kapasitesinde bir takım ilerlemelere neden olur (Zoellner & Maercker, 2006). Kişi TSB yaşadığı zaman, kendisini daha güçlü hisseder, başkalarına karşı kendisini daha çok açar, daha çok merhamet duygusu geliştirir (Tedeschi ve ark., 1998). Tüm bu değişimler kişiyi prososyal davranış gösterme konusunda daha çok motive edebilir. Ayrıca travma kişinin hayata ve kendisine dair varsayımlarını tahrip eder. TSSB belirtileri kişinin bu varsayımları tekrar inşa etme sürecini yansıtır olabilir (Joseph & Linley, 2006). Mevcut çalışma TSSB ile prososyal davranış eğilimi arasında ki ilişkininde TSB ile ilişkili olduğunu göstermektedir. Kişi bu süreçle baş etmek ve travmatik olayda anlam bulmak için daha çok prososyal davranış gösteriyor olabilir.

Sonuç olarak, mevcut çalışma, empati eğilimini kontrol ettikten sonra TSB'in TSSB belirtileri ile prososyal davranış eğilimi arasındaki ilişkide aracı rolü olduğunu göstermektedir. Kişiler daha yüksek TSSB belirtileri gösterdikçe, daha çok TSB yaşıyorlar ve daha yüksek TSB skorları prososyal davranış yaşama ihtimallerini artırıyor.

4.2. Çalışmanın Kısıtlılıkları ve Güçlü Yönleri

İlk kısıtlılık katılımcıların özellikleriyle alakalıdır. Tüm katılımcılar üniversite öğrencilerinden oluşmaktadır ve çoğu şehir ya da büyük şehirlerden gelmektedir. Bu durum çalışmanın genellenebilirliğini düşürmektedir. İkinci olarak, katılımcılar değişik travma türlerini eşit sayıda rapor etmemişlerdir. Belki travma türlerine göre kişinin prososyal davranış gösterme eğilimi değişiyor olabilir. Ayrıca travma yaşamayan kişilerle travma yaşayan kişi sayısının eşit olmayışı çalışmanın diğer bir kısıtlılığıdır.

Çalışmanın ilk güçlü yanı, mevcut çalışma prososyal davranış eğilimini travma yaşayan ve yaşamayan iki grup arasında karşılaştıran birkaç çalışmadan biridir. Bu bulgu olmadan iki grup arasında prososyal davranış eğilimi konusunda

fark olduğunu söylemek mümkün değildir. İkinci güçlü yönü de, mevcut çalışmanın TSB'in TSSB belirtileri ile prososyal davranış eğilimi arasındaki ilişkide aracı rolünü göstermesidir. Bu ilişkide aracı rol oynayan değişkenler hakkında bilgi travma sonrası bu değişkenleri güçlendirmek açısından yararlı olabilir.

4.3. Çalışmanın Katkıları ve Gelecek Çalışmalar için Öneriler

Travma sonrası madde kullanımı ya da şiddet gibi olumsuz neticeler literatürde daha çok çalışılmaktadır (Vollhardt, 2009). Olumlu neticelere odaklanmak travma yaşamış kişilerde bu yönleri güçlendirmek açısından önemli olabilir. Ayrıca mevcut çalışma kişinin travmatik olayla ilgili olumlu değişimleri fark ettiği takdirde prososyal davranış gibi olumlu sonuçlar gösterebileceğini göstermektedir. Bu çalışma travma sonrası rehabilitasyonun ve iyileşmenin önemine vurgu yapmaktadır.

Mevcut çalışma TSB'in TSSB belirtileri ile prososyal davranış eğilimi arasında ki ilişkide aracı rolünü göstermektedir. Önceki çalışmalar empati gibi aracı faktörlerin etkisini göstermiştir (Vollhardt & Staub, 2011). Ayrıca Vollhardt (2009) travmatize olmuş kişiyle benzerlik ve duygusal kontrol gibi değişkenleri bu ilişkiyi etkileyen faktörler olarak önermiştir. Gelecekteki çalışmalar alternatif arabulucu değişkenlerini araştırabilir. Ayrıca nitel çalışmalar travmanın prososyal davranışta artışa neden olduğu süreçle ilgili detaylı bilgi sunabilir.

I. Tez Fotokopisi İzin Formu

TEZ FOTOKOPİSİ İZİN FORMU

ENSTİTÜ

Fen Bilimleri Enstitüsü

Sosyal Bilimler Enstitüsü

Uygulamalı Matematik Enstitüsü

Enformatik Enstitüsü

Deniz Bilimleri Enstitüsü

YAZARIN

Soyadı : Doğan

Adı : Funda

Bölümü : Psikoloji

TEZİN ADI (İngilizce) : The Mediating Role of the Posttraumatic Growth in the Relationship between Posttraumatic Stress and Prosocial Behavioral Tendencies

TEZİN TÜRÜ : Yüksek Lisans Doktora

1. Tezimin tamamından kaynak gösterilmek şartıyla fotokopi alınabilir.

2. Tezimin içindekiler sayfası, özet, indeks sayfalarından ve/veya bir bölümünden kaynak gösterilmek şartıyla fotokopi alınabilir.

3. Tezimden bir (1) yıl süreyle fotokopi alınamaz.

TEZİN KÜTÜPHANEYE TESLİM TARİHİ: