# PSYCHOMETRIC PROPERTIES OF THE CUMULATIVE TRAUMA SCALE: EVALUATION OF THE VALIDITY AND RELIABILITY IN A TURKISH SAMPLE

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Approval of the Graduate School of Social Sciences

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# ABSTRACT


PSYCHOMETRIC PROPERTIES OF THE CUMULATIVE TRAUMA SCALE:
EVALUATION OF THE VALIDITY AND RELIABILITY
IN A TURKISH SAMPLE



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Stressful life events leading to traumatic reactions are noteworthy, and trauma studies generally consider one traumatic event which an individual experienced recently or affected most dramatically. However, cumulative impacts of traumas are also necessary to focus especially in the cultures in which traumatic events are common. The main aim of the current study is to adapt the Cumulative Trauma Scale-Short Form (CTS-S) into Turkish and to investigate its psychometric properties to use in trauma-related researches. In the adaptation process, the scale was translated into Turkish, and clarity of scale was checked. The study sample consisted of 384 participants who have at least one traumatic experience and older than 18 years, recruited through snowball sampling. For examining the reliability of the CTS-S, interrater and internal reliability analyses were conducted. For the validity purposes, correlation analyses were run between the CTS-S and concurrent and discriminant validity scales. Moreover, the most commonly and most frequently experienced traumatic events in Turkish culture were investigated, and gender differences were highlighted. A result of the current study revealed the adapted

version of the CTS-S is a reliable and valid instrument. Furthermore, male and female samples were found to be experienced different traumatic events in terms of occurrence and frequency, and evaluation of these events varied across gender. The findings of the present study were discussed in line with related literature and the original study of the CTS-S. Finally, the strengths and limitations of this study were presented, and suggestions for further research were pointed out.

**Keywords:** Cumulative Trauma Scale, Reliability, Validity, Adaptation, Turkish Sample

# ÖZ

KÜMÜLATİF TRAVMA ÖLÇEĞİNİN PSİKOMETRİK ÖZELLİKLERİ:
GEÇERLİK VE GÜVENİRLİĞİN
TÜRK ÖRNEKLEMİNDE İNCELENMESİ

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Travmatik tepkilere yol açan stresli yaşam olayları dikkate değer bulunmaktadır ve travma çalışmaları genellikle kişinin en son yaşadığı ya da kişiyi en çok etkileyen travmatik olayları değerlendirmektedir. Ancak, travmaların birikimsel etkilerine özellikle travmatik olayların sıkça görüldüğü toplumlarda odaklanılması gerekmektedir. Bu çalışmanın temel amacı, travma çalışmalarında kullanabilmek için Kümülatif Travma Ölçeği-Kısa Form (KTÖ-K)'u Türkçe'ye uyarlamak ve ölçeğin psikometrik özelliklerini incelemektir. Uyarlama sürecinde ölçek Türkçe'ye çevrilmiştir ve anlaşılabilirliği kontrol edilmiştir. Çalışmanın örneklemini 18 yaşından büyük ve en az bir travmatik yaşantı geçiren 384 katılımcı oluşturmaktadır. Bu katılımcılara kartopu örneklem yöntemi ile ulaşılmıştır. KTÖ-K'un güvenirliğini ölçmek için, değerlendiriciler arası güvenirlik ve iç güvenirlik analizleri yürütülmüştür. Geçerliği test etmek amacıyla, KTÖ-K ile eşzamanlı ve ıraksak geçerlik ölçekleri arasında korelasyon analizleri yapılmıştır. Ayrıca, Türk kültüründe en çok ve en sık deneyimlenen travmatik olaylar araştırılmıştır ve cinsiyet farklılıkları vurgulanmıştır. Çalışmanın sonucu KTÖ-K'un uyarlanmış versiyonunun

güvenilir ve geçerli bir ölçüm aracı olduğunu göstermiştir. Buna ek olarak, erkek ve kadın örneklemlerinin farklı travmatik yaşam olayları deneyimledikleri ve bu olayların değerlendirmelerinin cinsiyete göre farklılık gösterdiği bulunmuştur. Çalışma bulguları ilgili literatür ve ölçeğin orjinal çalışması doğrultusunda tartışılmıştır. Son olarak, bu çalışmanın güçlü yönleri ve sınırlılıkları gösterilmiştir ve ilerideki çalışmalar için önerilere işaret edilmiştir.

**Anahtar Kelimeler:** Kümülatif Travma Ölçeği, Güvenirlik, Geçerlik, Uyarlama, Türk Örneklemi

To the people who I lost…

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# CHAPTER 1

# INTRODUCTION

Trauma is a phenomenon that has been frequently studied in the field of psychology research and psychological interventions for decades. The formation, types, effects, and intervention areas of trauma have been investigated in many works. Most of the studies related to trauma focus only on a single traumatic event that has affected the individual recently or in his/her lifetime. Although studies largely focus on a single traumatic experience, most individuals are exposed to multiple stress-based events in their lives. Therefore, exposure to multiple traumas and the features (types, duration and frequency) of these traumas must be addressed in the field of research and the impacts of such multiple exposures needs to be considered in intervention efforts. In this thesis, trauma in a general sense, the notion of cumulative trauma, the theory behind this term and an instrument to evaluate the features of cumulative trauma will be discussed in detail in the introduction section. The main aim of this thesis is to investigate the psychometric qualities of the Cumulative Trauma Scale in a Turkish sample.

## 1.1. Trauma

Trauma is defined in DSM-5 as "exposure to threatened death, serious injury or sexual violence" (American Psychiatric Association, 2013). Exposure to the traumatic events can be in a direct manner which can be exemplified as physical abuse, car accidents, earthquakes, or in an indirect manner such as witnessing the event, learning that something bad happened to loved one(s), and confrontation with the details of the traumatic event repeatedly. Most commonly encountered traumatic events can be listed as traffic road accidents, sexual assault, robbery, physical assault, tragic death, war, natural disasters, unexpected loss of a loved one,

experiencing life-threatening illness, etc. (Frans, Rimmö, Aberg, & Fredrikson, 2005; Karanci et al., 2012).

Many studies have investigated the prevalence of trauma experience and the results indicated that exposure to a traumatic event is quite common; indeed, the lifetime prevalence rates ranged from 56 to 90% (Boals, Riggs, & Kraha, 2013; Breslau, Peterson, Poisson, Schultz, & Lucia, 2004; Flett, Kazantzis, Long, MacDonald, & Millar, 2004; Frans, Rimmö, Aberg, & Fredrikson, 2005; Gül, 2014; Karanci et al., 2012). The rates change based on the characteristics of the sample surveyed; for instance, research with clinical or minority populations can reveal higher frequencies of occurrence.

Trauma can strike the life of people of every culture, race, gender, ethnicity, age, sexual orientation and educational background. Yet, every trauma does not lead to the same degree of psychological devastation in people because of the differences in the nature of the event and individual differences in personality, resources and coping strategies (Finkelstein, 2016; Kumari & Mukhopadhyay, 2016; Madamet, Potard, Huart, El-Hage, & Courtois, 2018). Generally, traumatic events are classified into two general categories, those caused by natural disasters/traumas or human-made factors which are interpreted differently according to the sense of intentionality, inevitability, and controllability. Thus, while trying to predict the effects of a highly stressful event, the objective and the subjective characteristics of the incidence must be considered jointly (Center for Substance Abuse Treatment, 2014). A traumatic experience can be a single event, a series of events, and/or a chronic condition in terms of the frequency, the interpretations on whether it is caused intentionally or not, whether it affects the individual directly or indirectly, and whether it is expected or unexpected in nature. Besides the objective characteristics, the meaning that is attributed to this experience by the individual and the culture has substantial influence on the processing of the event.

## 1.2. The Effects of Trauma

Traumatic life events affect everyone in different ways. The impacts of a traumatic event on individuals can differ based on the factors such as the personality

of the individual, the type, duration and characteristics of the event(s), the meaning of the experience, and sociocultural factors. Some people who encounter with traumatic life events may struggle with the symptoms of post-traumatic stress disorder (PTSD), or show resilience in the face of these stressful experiences; however, most of them display stress-like signs that may not fully fit the diagnostic criteria of a psychological disorder. Bremner and Marmer (1998) summarized the effects of trauma as depression, loss of interest, dissociation, memory impairments, chronic pain, sleep and eating disturbances, emotional overwhelming, and so on. More specifically, intrusive thoughts about the event, memory impairments, cognitive errors about self and the world were indicated in several studies as posttraumatic cognitions (Davis et al., 2016; Ehlers, 2010; Foa & Rothbaum, 1998; Takarangi, Strange, & Lindsay, 2014).

In terms of the emotional impacts, difficulty in regulating feelings such as anger, anxiety, sadness, and shame can be observed after traumatic events in the survivors (Badour, Resnick, & Kilpatrick, 2017). Individuals who experienced a trauma can be overwhelmed by these negative emotions, or they can become emotionally numb by detaching from the experience (Feeny, Zoellner, Fitzgibbons, & Foa, 2000; Foa, Riggs, & Gershuny, 1995).

Moreover, some behavioral changes such as somatic difficulties, sleep disturbances, respiratory, and dermatological disorders, irritability, and self-destructive behaviors are observed in individuals after traumatic events. Especially, suicide, alcohol and drug abuse, driving while intoxicated, excessive gambling and aggressive behaviors were found to be very common in trauma survivors (Lusk, Sadeh, Wolf, & Miller, 2017; Santa Mina & Gallop, 1998). One of the mostly studied disturbances after traumatic events is posttraumatic stress disorder which will be evaluated in the next section.

### 1.2.1. Posttraumatic Stress Disorder (PTSD)

Traumatic experiences generally evoke great distress which some individuals may not handle effectively and thus result in psychopathology. DSM-5 defines trauma-related disorders as posttraumatic stress disorder (PTSD), acute stress

disorder, adjustment disorders, reactive attachment disorder and persistent complex bereavement (American Psychiatric Association [APA], 2013). PTSD is one of the most commonly seen and investigated pathological outcome after experiencing traumatic life events. Indeed, PTSD prevalence was reported as 12.4% in rural population of South Africa (Peltzer et al., 2007), 7.4% in the general population of the Netherlands (de Vries & Olff, 2009), approximately 8% among US citizens in their lifetime (Vieweg et al., 2006) and around 10% in a Turkish sample (Gül, 2014; Karanci et al., 2012). Percentages can differ according to occupations or special groups. For instance, the overall prevalence of PTSD among rescue/recovery workers was reported as 12.4% and 6.2% for police officers (Perrin et al., 2007). Another study documented that prevalence of PTSD among refugees that settled in western countries is 9% (Fazel, Wheeler, & Danesh, 2005).

Diagnostic criteria for posttraumatic stress disorder in DSM-5 include the symptoms of event-related intrusions, avoidance, negative alterations in mood and cognitions, changes in arousal and reactivity which last for more than 1 month after the traumatic experience (APA, 2013). Generally, posttraumatic stress disorder is seen as comorbid with other disorders such as depression, anxiety and sleep disorders, and substance abuse (Creamer, Burgess, & McFarlane, 2001; Flanagan, Teer, Beylotte, Killeen, & Back, 2014; Ginzburg, Ein-Dor, & Solomon, 2010; Maher, Rego, & Asnis, 2006). Thus, comorbidity can make the treatment process more complicated. In the treatment of PTSD, cognitive-behavioral therapies, eye movement desensitization and reprocessing (EMDR), and pharmacotherapy were indicated as effective in various research papers (Bradley, Greene, Russ, Dutra, & Westen, 2005; Cukor, Olden, Lee, & Difede, 2010; Haller, Myers, McKnight, Angkaw, & Norman, 2016).

In the related literature, who is more vulnerable to PTSD is one of the basic research question for decades. Female gender, having cognitive vulnerabilities, history of mental disorders and prior trauma exposure are the reported features which were found to be related to PTSD symptoms (Sareen, 2014; Tolin & Foa, 2006). Furthermore, individuals with neurotic personality characteristics and genetic abnormalities in serotonin transporter gene, and people who tend to use avoidance

coping strategies were shown as more prone to the post-traumatic reactions (Fauerbach et al., 2009; Navarro-Mateu, Escámez, Koenen, Alonso, & Sánchez-Meca, 2013; Sareen, 2014).

In addition to the simple PTSD, Herman (1992) proposed the concept of complex PTSD and defined it as a pathological outcome seen after traumas which are experienced in early childhood and continues for a certain period of time. That is, rather than a single trauma, recurring nature of the trauma exposure were associated with the complex PTSD. Also, particularly childhood traumas such as neglect, sexual and emotional abuse were indicated as important antecedents of complex PTSD symptoms (Rosenkranz, Muller, & Henderson, 2014). A reason for emphasizing childhood traumas in relation to complex PTSD is that early life traumas plays a decisive role in how adult traumas were experienced. For example, a study conducted by Cloitre and her colleagues (2009) showed that multiple traumas exposed in childhood influences the presence of complex trauma symptoms in adulthood. Moreover, literature indicated that PTSD is different from complex PTSD by its nature; that is, a reseach findings revealed that neurobiological profiles, including structural abnormalities and brain activity, of patients with PTSD and complex PTSD (Thomaes et al., 2015). Thus, patients with complex PTSD need a treatment program different from patients with simple PTSD.

### 1.2.2. Posttraumatic Growth (PTG)

Although the traumatic events and their outcomes are generally expected to lead to adverse outcomes, these reactions and coping with them can initiate positive transformations in the individual. In fact, most of the people who face traumas do not go through depression or PTSD. They recover from the emotions that trauma brings such as guilt, pain, and they learn meaningful inferences from that experience. Furthermore, they may experience positive transformations. Post-traumatic growth (PTG) is the term to explain this positive impact after psychologically struggling with the traumatic event and finding a sense of personal growth (Tedeschi & Calhoun, 1995). Various studies conducted with the survivors of the traumatic events indicated that the prevalence rate of post-traumatic growth is almost 50% percent

among the participants (Sim, Lee, Kim, & Kim, 2015; Walker-Williams, Van Eeden, Van der Merwe, 2012; Xu & Liao, 2011). The growth can be observed in five domains which are the appreciation of life, enhanced relationships with others, noticing new possibilities in life and personal strength, and spiritual change (Collier, 2016; Tedeschi & Calhoun, 2004).

In the trauma literature, there are a considerable number of studies that investigated the question of who is more likely to experience post-traumatic growth. Female gender, spirituality, use of active–adaptive coping strategies, deliberate rumination, and high perceived social support were shown to be significant contributors of PTG (Danhauer et al., 2013; Gul & Karanci, 2017; Javed & Dawood, 2016; Karanci et al., 2012; Kesimci, Göral, & Gençöz, 2005). Similarly, being female, younger age, a higher level of education, a higher degree of event exposure and higher PTSD symptoms were pointed out as important predictors for post-traumatic growth after a traumatic experience (Xu & Liao, 2011).

Moreover, the type of the coping is one of the widely investigated factors in the studies related to post-traumatic growth. Arıkan and Karanci (2012) stated that optimistic coping and fatalistic coping styles were significant predictors of post-traumatic growth. Likewise, using religion, positive reframing, and acceptance as coping strategies were found to be related with PTG in a longitudinal study (Bussell & Naus, 2010).

Furthermore, personality characteristics are another important determinant when examining post-traumatic growth. Owens (2016) indicated that higher extraversion, agreeableness, and conscientiousness significantly predicted PTG after traumatic events. Similarly, conscientiousness, agreeableness, and openness to experience were found to be important predictors of almost all the domains of PTG, which are the appreciation of life, relating to others, personal strength, new possibilities, and spiritual growth (Karanci et al., 2012).

Lastly, it is also necessary to emphasize resilience at this point since it is a concept that is frequently confused with post-traumatic growth in the literature. It is generally defined as a psychological resource that helps individuals to cope with the stressful situations successfully and to adapt accordingly (Bonanno, 2004). That is,

the individual who was faced with the adversities end up with the positive outcomes with the help of their resiliency. It was argued in the literature that resilient individuals do not generally experience posttraumatic growth because they do not display the posttraumatic reactions severely; thus, there is a negative relationship between resilience and PTG due to the absence of the PTSD symptoms (Tedeschi & Calhoun, 1995; Zerach, Solomon, Cohen, & Ein-Dor, 2013). Yet, surprisingly, a recent study which was conducted by Ikizer, Karanci and Doğulu (2016) investigated two indicators of resilience (posttraumatic stress and stress-coping ability) and they found that stress-coping ability was positively correlated with the severity scores of PTSD symptoms, more specifically with the avoidance symptom domain.

## 1.3. Models on the Impact of the Traumas on Traumatic Reactions

In the literature, there are various models explaining the process leading to the effects of trauma, and the antecedents that may predispose individuals to experience traumatic reactions after experiencing a traumatic event. One of the conceptual models is the Conservation of Resources (COR) which was proposed by Hobfoll (1989). It suggested that personal and social characteristics are the sources of the individuals when struggling psychological distress. Maintenance or the losses of these resources (e.g. money, employment status, social support, family members, personal possessions, etc.) have an impact on the coping ability of the sufferers of a traumatic event. Gibbs (1989) contributed to the COR model by pointing out the importance of personal features such as age, gender, pathology history of the victims and the mediating role of coping behaviors. This model was empirically tested by Freedy, Shaw, Jarrell and Masters (1992). That is, Freedy and his colleagues (1992) conducted a study with hurricane survivors to test a conceptual model for adverse impacts and adjustment process following a natural disaster. The results indicated that adjustment after highly stressful events can be predicted by considering the risk factors that occur before, during and after the event. Pre-disaster factors can be exemplified as gender, marital status, income, resources, and personal characteristics of the individual; specifically, being female, single, and having lower income was shown to be associated with higher distress. For within-disaster period, the type of

the event, how much the individual is exposed to the event, and the loss of financial, material and social resources were found to be crucial factors that have an impact on the reactions of the survivor. All these factors affect the coping behaviors (e.g. problem focused coping, emotion focused coping, and disengagement coping) in the post-disaster period which in turn influences the positive or negative reactions. In addition to these factors, past trauma history, perceived life threat during the traumatic event and support were indicated as important in the psychological adjustment of an individual after a disaster (Freedy, Saladin, Kilpatrick, Resnick, & Saunders, 1994).

Dual Representation Theory, which was originally proposed by Brewin, Dalgleish and Joseph (1996), is another model to explain the development of PTSD. According to this theory, a traumatic event was encoded in memory with two parallel processes, referring to the situational accessible memories and verbally accessible memories. Verbally accessible memories are the conscious trauma knowledge that includes details of physical and emotional reactions given to the event; in contrasts, situational accessible memories are the non-integrated information about the traumatic event triggered by the contextual cues which resemble the traumatic event itself. The discrepancy of the information between two memories can be sometimes wider due to the violation of prior assumptions and different emotional processing, which in turn provides the basis of posttraumatic reactions such as flashbacks, nightmares and intrusive thoughts. In the more recent version of this theory, Brewin, Gregory, Lipton and Burgess (2010) suggested that contextual representations (C-reps) and sensory representations (S-reps) of the traumatic experience are consolidated in different parts of the brain, and the lack of integration between S-reps and C-reps results in the traumatic reactions because the historical context is not coherent with the traumatic event and its meaning cannot build up within the autobiographical memory.

To scientifically investigate the Dual Representation Theory and to use its suggestions as early intervention techniques, Holmes, James, Coode-Bate and Deeprose (2009) designed a study whether the visuospatial cognitive task which is presented after a traumatic event has an impact on symptoms of PTSD. The findings

of this study indicated people who were exposed to scenes of a traumatic film experienced flashbacks less frequently when they play the game (e.g. Tetris) after watching the film as compared to no playing game after the scene since the Tetris provided new sensory-perceptual images competing with the trauma memories. Also, Holmes, James, Kilford and Deeprose (2010) conducted another study to test if the similar results would be obtained after any games (Tetris vs. Pub-Quiz) following the traumatic scenes in a longer time interval. They found that Pub-Quiz, a verbal cognitive task, did not affect the decrement of flashbacks as contrary to Tetris condition. However, individuals exposed Tetris intervention after a long-time interval still reported less frequent flashbacks about the traumatic film. The results of these studies can be interpreted as supports for the model which underlined the importance of the situational accessible memories, or S-reps in the development of PTSD symptoms.

Another model is Parkinson's model on the factors affecting adaptation to traumatic events, which is shown in Figure 1. Parkinson (2000) proposed that the important elements in the adaptation process can be categorized into *pre-event, within-event* and *after-event factors.* Before experiencing the traumatic event, demographic characteristics (e.g. gender, age, etc.), personality traits, trauma history and financial resources form a basis for certain responses. During the incident, which type of event occurred, how much loss the person encountered and how severely the person was exposed to the devastation become significant predictors of the posttraumatic reactions. After the event, the interpretation of the experience, the extent of financial, social losses, the coping strategies and, whether or not the person got social support affects the post event traumatic reactions. Traumatic responses can show up as distress, re-experiencing, arousal, depression, anxiety, and PTSD.

More recently, trauma research rather than solely focusing on negative aftermaths, also started to examine positive transformations as a result of coping with traumatic events. One such positive transformation is post-traumatic growth defined as "the experience of positive change that occurs as a result of the struggle with highly challenging life crises" (Tedeschi & Calhoun, 1995). Schaefer and Moss (1992) examined psychological growth following life crisis and personal and

environmental contributors in positive outcomes. According to their framework, personal and environmental systems have an impact on the characteristics of the crisis in addition to event's own characteristics. All these collectively influence the cognitive appraisal and coping responses which in turn determine the positive consequences, like growth (see Figure 2). More specifically, financial resources and relationships with the family and society can be counted as environmental contributors while sociodemographic characteristics, health status, motivational factors, and self-efficacy are considered as factors related to the personal system. A life crisis leads to changes in these two systems. For instance, loss of a family member alters the environmental system, whereas a serious accident which causes deadly injuries modifies the personal system of the individual. Following these changes, the individual organizes the coping strategies in terms of cognitively and emotionally coping with the event, in three ways: appraisal-focused, problem-focused and emotion-focused coping. Finally, the way of coping with the crisis brings about positive changes such as enhancement in the social network, changes in priorities, and gaining control over emotions. In the model, shown in Figure 2, there is also a feedback loop from outcomes to personal and environmental system.

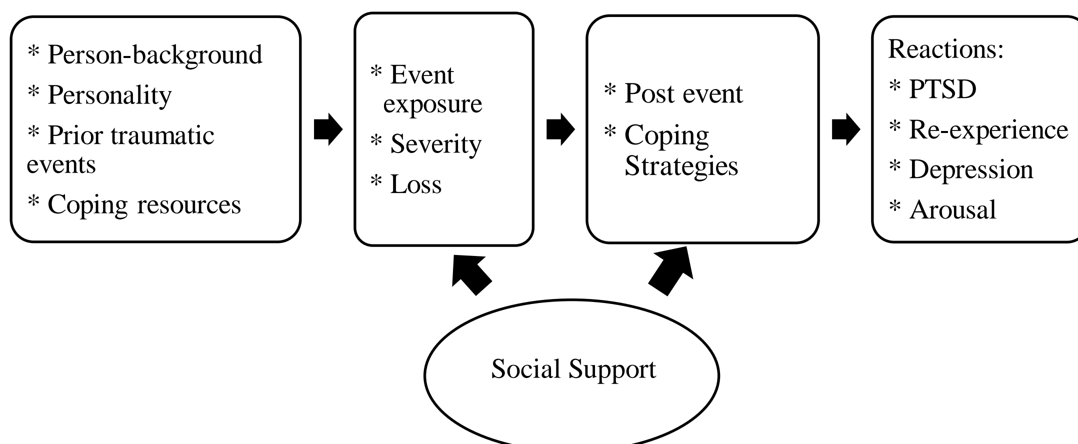


*Figure 1*. Factors affecting adaptation to traumatic events (Parkinson, 2000)

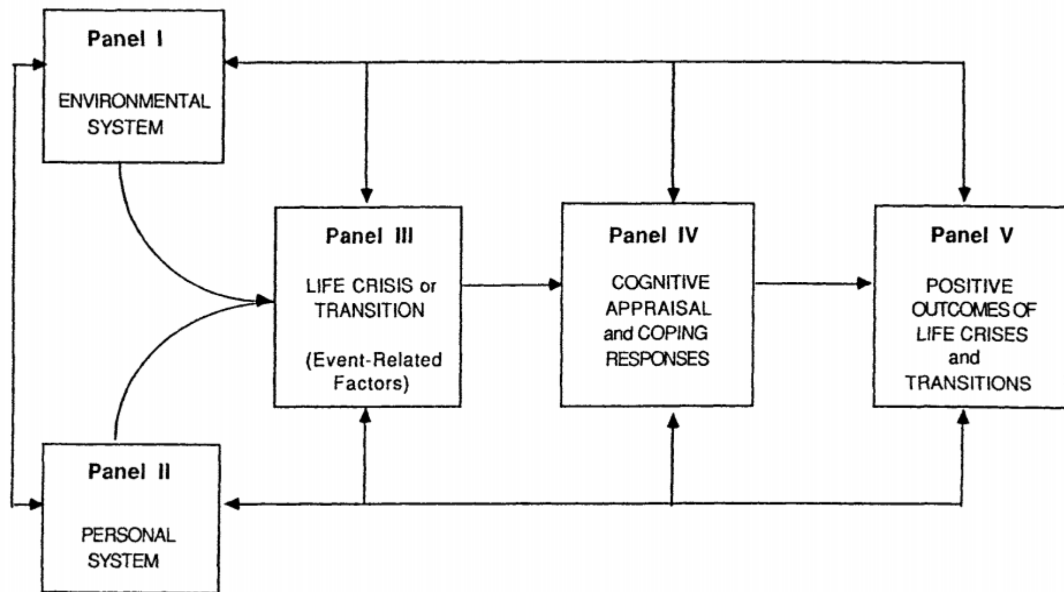


*Figure 2.* A conceptual model for understanding positive outcomes of life crises and transitions (Schaefer & Moss, 1992)

Similarly, Tedeschi and Calhoun (2004) provided a model to explain posttraumatic growth conceptually. Based on the model, people have assumptions about the world which determine the thoughts and the behaviors in life. However, highly stressful events can challenge the person's understanding of the world. That is, the assumptions of "predictable, controllable and safe world" is challenged which implies the seismic impact of the event. Since the assumptive world is threatened by the unexpected incidence, the individuals can display psychological distress and develop psychological disorders. However, attempts to cope with the aftermath of the trauma may also lead to a path of posttraumatic growth. All in all, with the influence of personal characteristics and the event itself, people's coping styles come into play and the rumination about the event, self-disclosure and the support which is provided by others play important roles in the process of posttraumatic growth.

## 1.4. Factors Related to Traumatic Responses

Similar to the effects of the traumas on individuals, who are affected more after experiencing a trauma is another gripping topic that has been broadly investigated in the trauma literature. Based on the models on traumatic reactions which were discussed in the previous section, precipitating factors such as personal background, personality characteristics, coping resources and event-related characteristics like type and severity were studied in samples with trauma exposure. In the literature, some studies showed that women were more likely to encounter traumatic events as stated in the study conducted by Kilpatrick and his friends (2013). However, there are contradictory results which show that men are more likely to be exposed to traumas in their lifetime or exposure to a traumatic event does not differ for men and women (Breslau, 2002; Gwadz, Nish, Leonard, & Strauss, 2007). Moreover, gender differences are commonly found for the type of the event; that is, the events man and women are exposed to can be different. To illustrate, women are more likely than men to report sexual abuse and assault (Perkonigg, Kessler, Storz, & Wittchen, 2000), while men usually experience nonsexual assault, accidents, combat, disaster or fire, and witnessing death or injury (Freedy et al., 2010; Tolin & Foa, 2006). Also, women who develop PTSD after experiencing sexual assault showed concurrent reactions of mistrust, betrayal, and anger; whereas, men displayed feelings like survivor guilt, moral injury as well as horror (Krupnick, 2017). A meta-analysis, reviewing 25 years of research on the impacts of traumatic events on civilians, pointed out that women were approximately twice as likely as men to meet the criteria for PTSD (Tolin & Foa, 2006). This result could be related to the differences in the type of traumas that they face, coping strategies which men and women commonly use, and the cultural gender roles.

Age is another factor that is evaluated in trauma research. It was found that younger age was associated with a higher frequency of trauma exposure (Frans et al., 2005), and trauma-related dissociative symptoms were more likely to be seen in people with early age traumas (Abbas, 2011). Another study indicated that older male Canadian veterans displayed fewer PTSD symptoms than younger ones after combat experiences (Konnert & Wong, 2014). Yet, several studies revealed that

experiencing traumatic events in childhood have serious impacts on the individuals rather than belonging to a specific age group. For instance, PTSD onset was indicated to be more related with childhood traumas like sexual assault, abuse and neglect experienced in childhood as compared to traumatic events that occur during the adolescent and early adult life (McCutcheon et al., 2010). Similarly, Schoedl, Costa, Fossaluza, Mari and Mello (2014) stated that traumas that occur in childhood such as a death of a close family member, extreme physical or sexual abuse were significantly correlated with the presence of PTSD in adulthood and adults with PTSD symptoms had more early life traumatic experience. Also, Schumacher, Coffey and Stasiewicz (2006) reported that the severity of trauma symptoms and alcohol consumption which is related to the posttraumatic stress is associated with childhood traumas.

The relationships of cultural background factors and ethnicity with traumatic reactions have also been evaluated in research studies. Especially ethnic and sexual minority group members are faced with more frequent trauma-related experiences, and they are found to show more severe PTSD symptoms. It was revealed that the lifetime prevalence of posttraumatic stress disorder after a traumatic event was 8.7% among Blacks, around 7.2% among Hispanics and Whites, and 4% among Asian people; also, being a member of a minority group affects seeking treatment adversely (Roberts, Gilman, Koenen, Breslau, & Breslau, 2011). Likewise, Tekin and his colleagues (2016) asserted that minority women who are Iraqi immigrants that were placed in Turkey were more likely to report feelings of guilt or worthlessness than men, and they suffered more from PTSD and depression as compared to Iraqi men. In addition to these, members of the sexual minority groups are exposed to social discrimination, physical and verbal assault which are counted as traumatic events. Katz-Wise and Hyde (2012) showed that LGB individuals were faced with victimization more than heterosexual individuals; in fact, LGB males experienced more traumatic events with respect to LGB females. Also, another study revealed similar result, showing that homosexual men who were infected with HIV were more likely to struggle with symptoms of trauma and dissociation than heterosexual men (Kamen et al., 2012).

As briefly stated in the PTG section, personality traits can be predisposing factors in the development of posttraumatic reactions. Aleksandra, Tanja and Eric (2016) showed that high neuroticism and low extraversion were significantly correlated with the symptoms of posttraumatic stress disorder in the sample of women war victims. Also, a different research paper revealed similar results. It was reported that people with neuroticism, negative emotionality, harm avoidance, and trait hostility showed more severe symptoms of posttraumatic disorder, whereas people with openness to experience, extraversion, conscientiousness, self-directedness and optimism were less likely to develop PTSD (Golestaneh, Pirmardvand, & Mosavi, 2016; Jakšić, Brajković, Ivezić, Topić, & Jakovljević, 2012). In the literature, there are also studies showing the contribution of some personality characteristics in the development of posttraumatic growth after traumatic exposure. For example, it was documented that extroversion, openness to experience, agreeableness, and conscientiousness are facilitating personality traits in the process of posttraumatic growth (Shakespeare-Finch, Gow, & Smith, 2005). In another study, extraversion was indicated as directly correlated with PTG scores; yet, PTG was shown to be predicted by openness to experience and agreeableness in the presence of religious beliefs as a mediator (Wilson & Boden, 2008).

Coping strategies and resources like the support system that individual have during and after the traumatic event are other parameters in the development of PTSD or trauma recovery. In the studies which investigate the role of coping style after the trauma, avoidance coping, fatalistic coping and helplessness coping were found to be strongly associated with distress including depression and PTSD symptoms following traumatic events, whereas active coping, seeking support coping and problem-solving coping were predictors of fewer distress symptoms, better mental health service seeking as well as PTG (Gul & Karanci, 2017; Littleton, Horsley, John, & Nelson, 2007; Rayburn et al., 2005). Moreover, a growing body of evidence indicated that religion and spirituality are used as coping strategies. Specifically, negative religious coping, which means questioning religious beliefs and faith, was demonstrated to be related with posttraumatic stress reactions and PTSD as compared to positive religious coping strategies like praying and seeking of

spiritual support (Berzengi, Berzenji, Kadim, Mustafa, & Jobson, 2017; Feder et al., 2013; Zukerman, Fostick, & Korn, 2017). Furthermore, Khawaja, White, Schweitzer and Greenslade (2008) reported that survivors of the traumatic event displayed effective coping strategies such as relying on religious beliefs and inner resources, reframing the situation, holding onto the future and the people who support them. The social and emotional support system is also vital in the recovery process after trauma. It was pointed out that emotional support coming from the partner and relatives lowered the severity of PTSD (Kušević et al., 2012). According to another study that was conducted by Smith and her colleagues (2014), family support in the aftermath of a natural disaster was more effective in lowering psychological trauma symptoms as compared to community support.

Finally, the characteristics of the event such as type, duration and the frequency of the trauma are essential factors when predicting the outcome of the traumatic experience. Studies that were conducted in different populations pointed out that direct exposure to traumatic events and man-made traumas, for example, sexual abuse, are associated with more severe posttraumatic stress reactions (Lee, Furnham, & Merritt, 2017; Shakespeare-Finch & Armstrong, 2010). Likewise, Jakob and her colleagues (2017) indicated that high frequency of traumatic events and intentionally caused traumas such as sexual abuse and combat in the veteran sample were found to be associated with severe PTSD symptoms. It was asserted that when the traumatic experience has an ongoing nature, posttraumatic stress disorder symptoms become more salient and severe in individuals who are exposed to that trauma (Goral, Lahad, & Aharonson-Daniel, 2017; Rzeszutek, Oniszczenko, Żebrowska, & Firląg-Burkacka, 2015). More importantly, multiple traumatic experiences, specifically man-made traumatic events, increased the severity of the symptoms of PTSD and suicidality; in fact, each additional trauma increased the rate of suicidal ideation and suicidal attempt in the rate of 20.1% and 38.9%, respectively (Frans, Rimmö, Aberg, & Fredrikson, 2005; LeBouthillier, McMillan, Thibodeau, & Asmundson, 2015).

Although there are a number of studies that suggested the crucial impacts of multiple traumatic experiences, most of the research studies focusing on trauma and

its consequences are generally based on the occurrence of a single traumatic event. Yet, in clinical and in refugee and minority populations single trauma in the course of a lifetime is the exception. Also, studies indicate that people with multiple types of trauma exposures are more likely to experience symptomatology than those with fewer types of trauma exposures. Therefore, the next section will present findings related to the concept and effects of cumulative trauma.

### 1.5. Cumulative Trauma

Follette, Polusny, Bechtle and Naugle (1996) introduced the notion of *cumulative trauma* (CT) which is an accumulation of the effects of multiple victimization experiences as reflected by the total number of a particular type of aversive event that happened for several times or the occurrence of different types of traumas that is experienced by an individual over her/his life course. Many people are exposed to potentially traumatic events at several points in their lives. Indeed, it was reported in an epidemiological survey of the US household population that people experienced an average of 3.3 traumatic events in their lifetime (Benjet et al., 2016). In Turkey, average traumatic events that people encountered was documented as 2.22 to 2.69 in a representative population from three provinces, diagnosed with probable PTSD and no PTSD, respectively (Karancı, Aker, Işıklı, Erkan, Gül, & Yavuz, 2012). Cumulative trauma is a quite common notion especially in populations that face with the situations such as war, forced migration, exile and discrimination based on race or sexual preferences (Finklestein & Solomon, 2009; Loeb et al., 2017; Veronese, Pepe, Massaiu, De Mol, & Robbins, 2017). Indeed, they are more likely to struggle with the more severe distress and display self-destructive behaviors (Millender & Lowe, 2017).

In the trauma literature, there are several studies that investigated the impacts of multiple traumatization through adverse events such as childhood sexual and physical abuse, neglect and domestic violence on the individuals' psychological health. For instance, it was shown that when the number of traumatic experiences increase, posttraumatic stress disorder severity rises up dramatically, including symptoms like dissociation, somatization, depression and interpersonal problems

(Martin, Cromer, Deprince, & Freyd, 2013; Roberts, 2013). Similarly, Suliman and his colleagues (2009) reported that cumulative trauma was linearly associated with the increase in posttraumatic symptoms and depression rather than anxiety. Moreover, there are research papers showing that increased cumulative trauma is related to higher rates of PTSD symptoms in the general population and in clinical populations (Briere, Agee, & Dietrich, 2016; Hauff, Fry-McComish, & Chiodo, 2016;). Also, cumulative traumas lasting for a certain period of time were indicated as related with the complexity of the trauma symptoms, specifically complex PTSD (Cloitre et al., 2009). Within the subject of multiple victimizations and the adverse effects of these experiences, researchers have placed considerable emphasis on the traumas that the individuals experience in their childhood. McCutcheon and her colleagues (2010) investigated the impact of childhood sexual, physical and emotional abuse, and found that these events are the strongest predictors of the onset of PTSD especially in the presence of additional traumas. Also, Copeland, Keeler, Angold, and Costello (2007) reported that although the risk of exposure to traumatic events is high in the general population of children, they are more likely to display PTS symptoms when there is a history of multiple traumatization. In addition to the presence of PTSD, cumulative trauma, particularly in the childhood years, has an effect on both internalized and externalized behavioral problems such as difficulty in emotion regulation, dissociation, aggressive or socially avoidant behaviors (Cloitre et al., 2009; Hébert, Langevin, & Oussaïd, 2017). Interestingly, experiencing multiple traumatic events do not only affect the severity of the child's psychological well-being; but also, the symptoms of traumas are more complex in their caretakers (Hodges et al., 2013). Also, one more fascinating study that was conducted with college women indicated that women exposed to non-interpersonal traumas (e.g. life-threatening illness, accident, traumatic loss) did not differ from the ones with no trauma exposure in terms of the severity of trauma symptoms; yet, those with multiple traumatic experiences showed significantly more symptoms (Green et al., 2000). Thus, they claimed that studies must also include an evaluation of previous trauma exposures while investigating the outcome of the target events by considering the event type and dose.

### 1.5.1. A New Perspective on Trauma: Developmentally-Based Trauma Framework (DBTF)

Based on the results of growing research in the area of cumulative trauma, Kira (2012) suggested to use a new understanding in the subject of trauma and developed the *Developmentally Based Trauma Framework (DBTF)* by integrating three valid trauma paradigms which are the psychiatric paradigm, the developmental paradigm, and the intergroup paradigm. Psychiatric paradigm includes the traumas which result in harm to the physical integrity of the individuals such as actual or threatened death and serious injury. Also, this paradigm basically focuses on the potential development of PTSD and trauma-related symptoms. Developmental paradigm covering psychoanalytic and developmental theories accepts the traumas as events that are triggered by the caregiver(s) when they fail to satisfy the physical, closeness and attachment needs of the child. Attachment disruptions, father-mother abandonment, foster care placements, abuse and neglect can be exemplified for this paradigm. Especially harassment by the caregiver physically and/or sexually brings about serious consequences like severe PTSD symptoms, withdrawing socially, emotional difficulties, mood and substance use disorders (Filipas & Ullman, 2006; Alaggia, 2005; Molnar, Buka, & Kessler, 2001). In the intergroup paradigm, trauma is explained as a process triggered through social interactions and manifested as social violence, interpersonal or intergroup macro and microaggressions, or directly hate crimes like genocide, discrimination, slavery and torture. That is to say, the manifestation of racism, both subtle and direct forms, can cause physical and psychological harm and produce race-based traumatic stress reactions which can be observed culturally or cross-culturally (Carter, 2007).

The developmentally based trauma framework was developed by considering these three paradigms, in order to evaluate the etiology of symptoms after the traumas occurred. Thus, with the help of the DBTF, trauma was defined and seen from a broader perspective including the cumulative impacts of the traumas on the individuals (Kira, 2012). Moreover, the DBTF also represents two dimensions, namely defined as horizontal and vertical. Horizontal dimension mostly contains the traumas that are induced by human, society and internal-external physical events. For

example, traffic accidents, life-threatening illnesses, discrimination by the society, massacre, sexual and emotional harassments, can all be considered in this dimension. On the other hand, traumas in the vertical dimension are based on the characteristics of the trauma. That is, the severity, frequency and the chronicity of the trauma are considered, and traumas can be single trauma, repeated or may have an ongoing characteristic. Although it has two dimensions, traumatic events are not entirely separated from each other and a specific traumatic incidence can be evaluated by its horizontal and vertical dimensions. A continuing emotional abuse by a partner can be labeled vertically as ongoing trauma, and horizontally as attachment trauma or person-made, for example.

### 1.5.2. Trauma Taxonomy

Kira (2001) also proposed a trauma taxonomy which is a structural classification that supports the DBTF (see Figure 3). Even though there are some distinctions in the definitions of traumatic events within the taxonomy, there are no clear boundaries when classifying the events. That is, an example of a traumatic experience can fit in the characteristics of more than one category. Also, it has two classifications in line with the dimensions of the framework.

In the first classification category, traumatic events are classified according to the human functioning that is affected. *Attachment trauma* is one of these events. Feelings of security and warmth, which are provided by the parents or the caregivers, are the essential needs of children in their childhood. If these needs are unmet, the connectedness between the figures and the child is damaged which brings about the traumas in attachment background. The potential events that can result in attachment traumas are abandonment by a caregiver, death of parents or neglecting the physical and emotional needs of the child. Literature which is based on the attachment traumas indicated that attachment traumas which are prolonged or brief separations from the caregivers, neglecting and abusing the child resulted in insecure attachment styles in the adulthood and may lead to PTSD symptoms (Bryant et al., 2017; Erozkan, 2016). Similarly, it was reported that attachment traumas can trigger psychiatric disorders in later life (D'Hooghe, 2017; Özcan, Boyacioğlu, Enginkaya,

Bilgin, & Tomruk, 2016). Although attachment traumas mostly focus on the events in childhood, a traumatic experience with a significant other, i.e. a partner or spouse, can disturb the attachment capacity in adulthood. Events like affairs, divorce, and loss of the significant other can be given as examples. These events damage the perception of safety and bonding, and individuals try to deal with the hurt and betrayal to be able to recover from trauma. Sable (1991) asserted that losing the attached person can cause distress and prolong grieving since the lost person is a figure that symbolizes contact and comfort. Moreover, Borelli and Sbarra (2011) stated that divorced individuals blamed themselves for this experience which in turn led to psychological distress in the process of separation, especially when they have a trauma history.

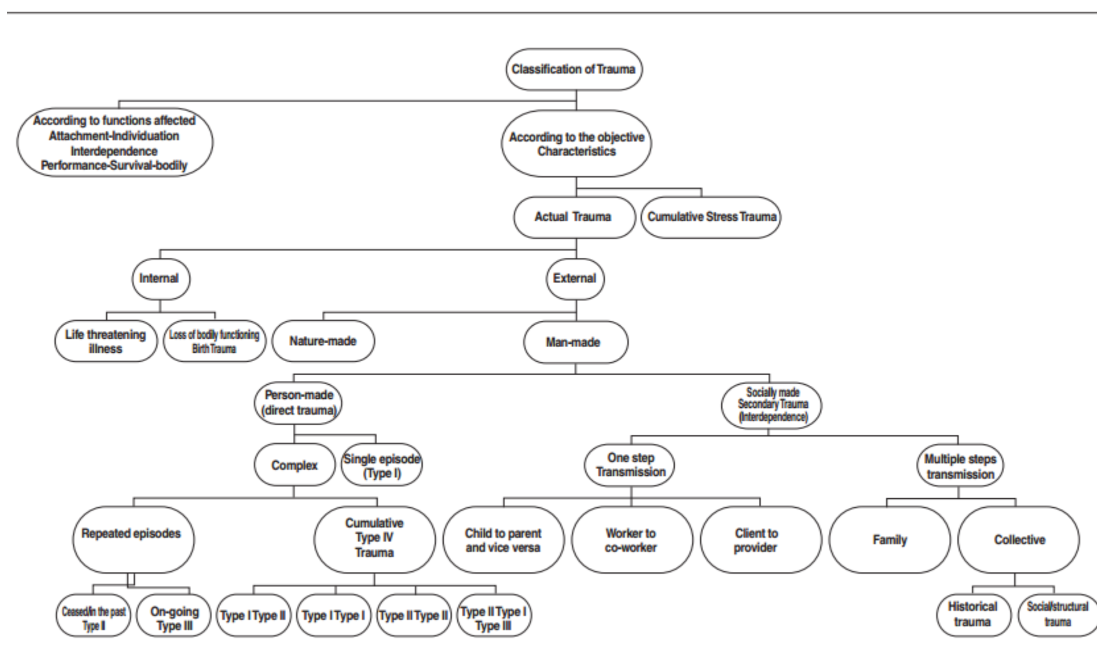


*Figure 3.* The trauma taxonomy (Kira, 2001)

*Identity trauma* is another traumatic event that was placed in the first classification. Formation of the identity and a sense of being a separate individual mainly start in adolescence and continue throughout the adulthood. Individuals try to discover the uniqueness of their potential in various areas such as personality, occupation, ideology, relationships and so forth. Traumatic events like domestic violence, sexual and physical abuse, torture and genocide can damage the transformation and the consolidation process of the self; that is, these can cause identity or autonomy traumas. Autonomy traumas can be activated personally via significant figures by abusing the rights of the child, or collectively via society by violating the rights of a specific group. In the literature, identity traumas were shown to be related with psychiatric problems like dissociative identity disorder and PTSD, depression, low self-esteem and self-destructive behaviors (Hill, 2002; Lewis, Yeager, Swica, Pincus, & Lewis, 1997; Tsirigotis & Łuczak, 2018).

Moreover, throughout the healthy process of identity formation, individuals do not entirely detach from their social networks; in fact, they learn how to connect with others while preserving their autonomy. Individuals need support socially and emotionally to maintain the feelings of security and belongingness. A child or an adult can be traumatized when the relationship with the social network is interrupted in the presence of events such as moving to a different place, changing the school, being excluded, and bullied, which is referred to as *interdependence trauma*. A meta-analysis revealed that bullied children in school and bullied adults at work were more likely to show PTSD symptoms in their lifetime (Nielsen, Matthiesen, Tangen, Idsoe, & Magerøy, 2015). Furthermore, it was shown that relocated children displayed adaptation problems and relocated adults developed posttraumatic stress disorder and depression especially when the relocation was forced or compulsory (Jurgens, Houlihan, & Schwartz, 1996; Najarian, Goenjian, Pelcovitz, Mandel, & Najarian, 2001).

Another traumatic experience is a*chievement traumas* or *self-actualization trauma*. Individuals set goals for themselves in line with their values and ideals. This helps them in the processes of survival, meaning-making, and identity formation. Mostly these goals can be reached with the help of energy, time or money. Thus,

when the individuals encounter issues like unemployment following lay-off or dismission, loss of money and health problems, they may not reach the goals that they set. Research studies which focus on the relationship between unemployment and traumatic symptoms showed that losing one's job and having financial loss triggers emotional stress and psychiatric symptoms (Nuttman-Shwartz, Gadot, & Kacen, 2009; Papa & Maitoza, 2013). As an example of the loss of the energy and health, Mehnert and Koch (2007) suggested that people who struggle with the life-threatening illness, i.e. cancer, developed depression, PTSD and anxiety disorders; and, they question the meaning of their lives and try to plan new achievements, accordingly. Thus, we can infer that they pass through self-actualization crisis.

Lastly, in the first category, *survival traumas* can be triggered in the presence of events which directly threaten the physical integrity of the individuals. Events like war, shooting, suicide, homicide, workplace injuries, traffic accidents, natural disasters can be counted in this category and these events may shake the belief system of the individual or the society inevitably in both positive and negative ways. For instance, after natural disasters like hurricanes and earthquakes, it was shown that survivors develop acute stress disorder and posttraumatic stress disorder; also, their perception of threat were sensitized and they felt more hopeless and helpless in line with decrement in the sense of personal control (Mills, Edmondson, & Park, 2007; Risler, Kintzle, & Nackerud, 2015). On the other hand, some people who were exposed to the similar traumatic events were found to experience posttraumatic growth when they received social support, actualized the communal activities and engaged with spiritual rituals (Chan & Rhodes, 2013; Wlodarczyk et al., 2016). Similarly, human-made traumas affect the survivors and the rest of the society in similar ways; however, their effects are more devastating than the nature-made events. In addition, survival traumas may contain events that the individual does not experience at first-hand; that is, witnessing or being informed about the event which happened to a loved one can also lead to similar distressing symptoms. For instance, a couple of studies concluded that family members of the war veterans displayed traumatic reactions like demoralizations, behavioral problems and decrease in

functioning (Dekel, Levinstein, Siegel, Fridkin, & Svetlitzky, 2016; Yager, Gerszberg, & Dohrenwend, 2016).

In the second classification category, traumas are placed according to their objective characteristics. At the first place, traumatic events are categorized on the basis of whether the event is an *actual traumatic event* or *a factitious event* in a cumulative manner. In the scope of factitious traumas, we can talk about the individuals who struggle with the difficulties within the daily hassles. Although these events do not directly cause a trauma-related disorder, they can experience some traumatic reactions over time, or, posttraumatic reactions can intensify with the impact of these trauma-like events. On the other hand, actual traumas can be triggered by *externally or internally induced* stimuli. For instance, life-threatening illnesses, losing bodily functions and hormonal dysfunctions can be counted as internally induced actual traumas, whereas externally induced events include accidents, bombing, tsunami, tornado, and so forth. External actual traumas are classified into two, namely *man-made,* or *nature-made*. Nature-made traumas can be exemplified as earthquake, hurricane, flood and evacuation while violence, war, terrorism and abuse are considered as human-made traumas.

In the taxonomy, human-made traumatic events are divided into two subcategories which are *indirect* and *direct* traumas. Indirect traumas are defined as society-made traumas; that is, impacts of the trauma experience are transmitted within different levels of the society. One of these levels is referred to as *one step transmission* of trauma. This type of trauma happens to a person or a group of people and the impacts transfer to a person or a group who is connected with the affected one(s). For example, a sexual trauma that happens to a child affects the parents of the child, or an achievement trauma which is experienced by an individual can traumatize his/her partner. Also, clinicians, emergency personnel, cameramen, members of the search and rescue teams, firefighters, police and military personnel can be regarded as risk groups for this type of trauma. It was shown in the literature that individuals who engage in these occupations are exposed to the disaster sites, narratives of the survivors and details of the events repeatedly which traumatizes them indirectly (Feinstein, 2004; Sheen, Slade, & Spiby, 2014; Zimering, Gulliver,

Knight, Munroe, & Keane, 2006). Moreover, *multiple steps transmission* of trauma is another category in the indirect traumas, in which traumas are transmitted cross-generationally and divided into two subcategories. The first one is *generational family trauma transmission.* Some traumas or the impacts of the events such as domestic violence, physical abuse and incest can occur within the family continuously. That is, parents inevitably reflect what they experience to their children which may lead to a possible change in the course of the development of the child, or individuals can put themselves in a situation that resembles the traumatic event experienced in their childhood. To illustrate, Hou, Yu, Fang and Epstein (2016) reported that people who experienced violence by original family in their childhood were more likely to be involved in intimate partner violence in their adult life. The second one is *collective cross-generational trauma transmission* which explains the transmission of the effects of trauma across generations and it has two kinds of traumas which are historical trauma and social-structural trauma. In the *historical trauma,* a group of people based on their color, ethnicity, or religion are exposed to traumatic events (e.g. slavery, genocide, etc.) historically. The impacts of these events can be observed in the descendants of the same group since historical traumas can bring the accumulation of trauma effects which may lead to an incapacity to effectively cope with the traumas that are newly encountered. For instance, Fossion and his colleagues (2015) documented that coping strategies of children of the Holocaust families were more incompetent than the general population, and they were more prone to depression and anxiety disorders. Furthermore, *social-structural traumas* are described as a structural violence that is induced by the society and based on social disparities. These traumas can be exemplified as poverty, hunger, prolonged malnutrition, unemployment, inadequate shelter and medical care. Lack of facilities and unequal opportunities within the society can evoke the concerns of different areas such as survival, achievement and identity of the exposed individuals. Thus, the community traumas may cause an increment in the level of socioemotional problems, and the development of traumatic reactions including self-destructive behaviors among the vulnerable populations (Seth, Jackson, DiClemente, & Fasula, 2017).

Nevertheless, *direct traumas* are considered as person-made, and this traumatic experience can be a one-shot event which means it happens only once or may occur in a cumulative manner, in which a single event arises frequently, or different events occur conjunctively. Accordingly, Kira (2001; 2012) represented four types of the direct traumas in the taxonomy. *Type I* traumas are single and sudden events that happen to an individual or a group. These events can trigger psychiatric disorders, especially PTSD symptoms, and impair human functioning. Being in a car accident or being involved in a natural disaster are the examples of this kind of traumas. *Type II* traumas are characterized as the repetition of similar traumatic episodes which has occurred in the past. Sexual abuse that has been repeated multiple times in one's past and combat can be exemplified for Type II events. Besides, *Type III* traumatic events are defined as the experience that continues over a time period and does not end completely. For example, racism, poverty and ongoing terrorism are the Type III traumas since the severe impacts of these events are considered in the light of prolonged exposure. Lastly, *Type IV* traumas are called *cumulative traumas*. The series of traumatic events can take different frequencies or sequences in the life course; that is, example events of Type I, Type II and Type III traumas can be seen in the timeline of an individual altogether.

In the trauma literature, as mentioned earlier, there is no theory that combines these different standpoints to explain the totality of trauma. For this reason, the Developmentally-Based Trauma Framework and trauma taxonomy, developed by Kira offers the opportunity to evaluate trauma and its impacts from a united perspective. The implications about the cumulative impacts of traumas are also the noteworthy contributions of this framework.

In the following section, the most commonly used assessment scales in the area of trauma research will be briefly discussed. After explaining the purposes of these measurements and the trauma areas that are focused, the newly developed scale, the Cumulative Trauma Scale (Kira et al., 2008) based on the Developmentally-Based Trauma Framework, will be covered.

## 1.6. Assessment Scales Used in Trauma Research

In the trauma literature, there are valid and reliable instruments which help to screen the impacts of traumatic experiences in terms of distress symptoms, severity of the trauma-symptoms, mental and physical health, social support and coping styles. Most widely used scales can be exemplified as the Impact of Events Scale-Revised (IES-R), PTSD interview (PTSD-I), Clinician Administered PTSD Scale (CAPS), PTSD Checklist (PCL), and Mississippi Scale for Combat-Related PTSD (M-PTSD) for evaluating the effects of psychological traumas (Steel, Dunlavy, Stillman, & Pape, 2011). In Turkey, the adapted version of some of these scales are available and they are reliable and valid measurements which are used in the studies related to the investigation of the impacts of traumatic events, manmade or non-manmade events. These are mainly used to examine the aftermath of a single traumatic experience, by focusing on the type of event and the following symptoms for several domains such as avoidance, reexperiencing and arousal. Indeed, studies in which these scales were used generally examined the effects of a single traumatic experience which had a strong impact on the individuals during lifetime or the influence of the recent stressful event by ignoring the prior multiple traumas. Thus, although these scales yield valuable data on the impact of single traumatic events, they nevertheless fail to consider the possible impacts of cumulative traumatic events that the individual may be exposed.

## 1.7. Cumulative Trauma Scale-Short Form (CTS-S)

As mentioned earlier, there are not many instruments to evaluate the aftermath of different types of traumatic events regarding the types of the event, the dose of the experience and its negative and positive effects on the individual. *The Cumulative Trauma Scale-Short Form* (CTS-S) was developed to meet this need for trauma-related studies (Kira et al., 2008). This instrument was constructed in the light of trauma taxonomy and developmentally-based trauma framework, as discussed in the previous sections. The scale helps to investigate the traumatic experiences to which an individual or a group was exposed in terms of the dose and type of the event and the evaluation of impact that is given by the survivor(s). CTS-S

was originally developed in English. Since the scale does not cover only one-culture specific event and it considers the experiences of minority populations, it was found to be worthwhile to translate it to different languages including Arabic, Spanish, Polish, and Nigerian.

CTS consist of 35 items, with the 3 items added in the final version. Also, there are different versions of the scale for adolescent and children samples. Items of the scale are corresponding to the seven major traumas which are collective identity trauma (5 items), personal identity trauma (6 items), survival trauma (6 items), attachment trauma (2 items), secondary trauma (7 items), achievement traumas (2 items) and gender discrimination (2 items). Also, there are 5 additional items which are not corresponding to the one of the seven categories. That is, there are totally 35 items including events such as natural disasters, accidents, war, sexual and physical assaults which were induced by parents or strangers, racism, and so forth. To illustrate, *"My mother has abandoned or left me, or separated from me when I was young."* is an example item for attachment traumas while *"My race has a history of being oppressed, discriminated against, or threatened by genocide."* is categorized in the discrimination related traumas. All items were presented to the participants to be rated on a Likert-type format.

As mentioned just above, this instrument measures cumulative trauma in terms of occurrence, frequency, type, and appraisals. Thus, each item is rated on several characteristics. Firstly, for the *occurrence parameter*, responders rate whether or not he or she experienced this particular event in his or her entire life on the frequency scale. That is to say, if the respondent chooses "never", the occurrence is accepted as "0", while the occurrence is coded as "1" if the individual chooses "once, two times, three times, or many times" on the scale. Then, if the event was experienced, how many times the given situation happened to him or her, is rated on a 5-point scale (never = 0, once = 1, two times = 2, three times = 3, many times = 4), reflecting the *frequency parameter.* In addition to these two parameters, there are two other parameters which are age and positive and negative appraisals. In the *age parameter*, the respondent is asked about the age at which the event was first experienced whereas, in the *appraisal parameter,* the individual is asked to express

how much he or she was affected by that experience negatively or positively on a 7-point Likert-type scale (extremely positive = 1, very positive = 2, somewhat positive = 3, neutral = 4, somewhat negative = 5, very negative = 6, extremely negative = 7).

#### 1.7.1. Scoring of the CTS-S

In the scoring process of the Cumulative Trauma Scale-Short Form, different scores can be obtained related to the parameters. For the first parameter, *occurrence measure* can be calculated by simply counting the responses of the individuals on whether the event occurred to them or not. That is, a "never" response is considered the event as "not happened" and coded as "0"; in contrast, other responses are accepted the event as "occurred" and coded as "1". For the *frequency measure*, if the occurrence was acknowledged then, the response to how many times it happened is used to calculate frequency of the cumulative traumas. A given situation is scored on a 5-point scale; that is, the trauma did not happen is scored as 0, the trauma happened once is scored as 1, two times as 2, three times as 3, and trauma happened more than three times is scored as 4. On the other hand, *appraisal measure* can be calculated as general appraisal, or by creating two appraisal subscales: negative and positive appraisal of events. The general appraisal is scored on a 7-point Likert-type scale (1= extremely positive, 2= very positive, 3= somewhat positive, 4= neutral, 5= somewhat negative, 6= very negative, 7= extremely negative). The developers of the scale (Kira et al., 2008) generally prefer to create two appraisal scores for the positive and negative appraisals. While the developers recode (4=1, 3=2, 2=3, 1=4) for the *positive appraisal measure,* they recode (5=1, 6=2, 7=3) for the *negative appraisal measure*. Thus higher scores for negative appraisal reflect higher negative impact and for the positive appraisal, higher scores reflect higher positive impact. Finally, *age measure* reflects the noted age by the participant about when the trauma first happened.

As an example of scoring of the whole scale, if the individual has experienced every event twice, the occurrence score will be calculated as 35 and frequency score as 70. If the appraisal score rated by the individual for every single event is 5, then

the negative appraisal score will be corresponding to the score of 35 since it is converted to 1.

### 1.7.2. Psychometric Properties of CTS-S

The Cumulative Trauma Scale-Short Form is a valid and reliable instrument. It was indicated to have an adequate internal consistency in an adult sample ($\alpha$ = .85), in male ($\alpha$ = .84) as well as female samples ($\alpha$ =.85) based on whole scale score. Also, the test-retest procedure was performed and it was shown to have almost excellent stability (.95) within 4 weeks interval (Kira et al., 2008; Kira, Fawzi, & Fawzi, 2013).

To be able to show the validity of the instrument, it was investigated in terms of construct, discriminant, convergent and predictive validity. For the construct validity, Kira and his colleagues (2008) run exploratory factor analysis which revealed 6 subscales. These are *collective identity trauma, personal identity trauma, survival trauma, attachment trauma, secondary trauma, and family trauma.* Later, achievement traumas and gender discrimination were added. The first one is called *collective identity trauma* which is exemplified with the item of “My race has a history of being oppressed, discriminated against or threatened by genocide” in the instrument. The second one is *personal identity trauma* and “I was led to sexual contact by someone older than me” is an example item for this subscale. The third subscale, *survival trauma*, is represented by the example item of “I have been involved in or exposed to war or combat”. The forth one is named as *attachment trauma* and "My mother had abandoned or left/ or separated from me when I was young" is an example for attachment subscale. The fifth one is *secondary trauma* subscale. In the scale, item of "I witnessed/heard one of my parents or caregivers hitting, hurting and threatening to kill my other parent or caregiver" is used to represent this subscale, for instance. The sixth subscale, *family trauma*, is exemplified with the item of “I remarried”. In addition, “I experienced frequent failures in school.” is a sample item for *achievement trauma subscale* and “I was put down, threatened or discriminated against by some other family members (e.g.,

parents, siblings) negative attitudes, stereotypes or actions because of my gender: being a boy or girl" for *gender discrimination* subscale.

Moreover, it is strongly and positively correlated with the torture severity ($r = .66$, $p < .001$) and Backlash trauma scale ($r = .34$, $p < .001$) which is an indication of convergent validity. For the discriminant validity, it was presented to be negatively correlated with the sociocultural adjustment ($r = -.25$, $p < .001$) and futuristic orientation ($r = -.37$, $p < .001$). Lastly, Kira and his colleagues (2008) indicated that it has validity in predicting post-traumatic stress disorder ($r = .54$, $p < .001$), cumulative trauma-related disorders ($r = .24$, $p < .001$), and poor health ($r = .37$, $p < .001$). Furthermore, in several trauma studies used CTS-S as an assessment tool, the score of cumulative trauma was found to be correlated with proactive coping ($r = .185$, $p < 0.05$), depressive symptoms ($r = 0.30$, $p < 0.01$), alcohol use ($r = 0.29$, $p < 0.05$), physical health ($r =.14$, $p < 0.05$) and mental health ($r =.24$, $p < 0.001$), which are the indications of the validity of the instrument (Gillespie & Gates, 2013; Millender & Lowe, 2017; Nael, 2012).

### 1.8. The Aim of the Thesis and the Hypotheses

As findings in the literature pointed out, individuals are exposed to different kinds of stressors and traumas which make them suffer physically and mentally. The source of the trauma can be natural or man-made. Rather than a single event, there is a high probability that individuals experience more than one traumatic event in their lifetimes which can vary in type and frequency. In fact, one-time traumatic experience is only an exception in a population when it has interpersonal, intercultural and cross-generational aspects. This scene does not completely differ in Turkey in terms of the type and the dose of the traumatic event; yet, even worse for minority populations. For instance, Aker, Önen and Karakilic (2007) indicated that natural disasters such as earthquakes, floods and landslides, traffic accidents, intimate partner violence, sexual assaults in both childhood and adulthood, terrorist attacks are the common traumatic incidences in the Turkish population. Likewise, in the Turkish trauma literature, it was shown that death of a loved one, witnessing a trauma and involving in a serious accident or having a deadly illness are the most

common events which leads to traumatic reactions (Altekin, 2014; Arikan, & Karanci, 2012; Karanci et al., 2012; Yılmaz, & Şahin, 2007). Indeed, it can be clearly stated that individuals from different groups (e.g, gender, ethnic and age groups) are being exposed to several different traumas through harassment within family and society, terrorist attacks, accidents, and so forth which brings the importance of cumulative trauma to the agenda.

In the light of an absence of a comprehensive instrument in the trauma-related research, Kira's Developmentally-Based Trauma Framework, trauma taxonomy and the Cumulative Trauma Scale were notable steps to investigate the additive impact of the traumas in terms of type, dose and appraisal. Thus, the aim of the current study was to translate the Cumulative Trauma Scale-Short Form into Turkish and to investigate its psychometric properties, in order to evaluate whether the Turkish version is a reliable and valid instrument that can be used in the Turkish trauma studies.

Based on the stated aims, the main hypotheses of the current study were:

*H1:* There will be a significant positive and small to moderate correlation between the adapted version of the Cumulative Trauma Scale-Short Form and the concurrent validity measurements, the Impact of Event Scale-Revised and the Posttraumatic Growth Inventory, after controlling for gender and marital status.

*H2:* There will be a weak correlation between the adapted version of the Cumulative Trauma Scale-Short Form and the discriminant validity instruments, the Social Adaptation Self-Evaluation Scale and the General Self-Efficacy Scale, after controlling for gender and marital status.

*H3:* Types of traumatic events experienced by males and females will significantly differ, and the impacts of experienced traumatic events will be more negative for females as compared to males in the adapted version of the Cumulative Trauma Scale-Short Form.

# CHAPTER 2

# METHOD

## 2.1. Participants

For the current study, 445 individuals were reached to fill the questionnaires. Yet, 61 individuals were not included in the research due to the reasons of incomplete instrument pack (N = 31), unfilled survey (N = 12) and unmet study criteria, i.e. age and at least one trauma exposure (N = 18). Also, during the data cleaning procedure, two participants were determined as outliers and excluded from the study. Thus, in total, 384 participants were included in the research.

The sample of the current study consisted of 384 participants. 213 participants (55.5%) were females and 171 participants (44.5%) were males. 242 participants (63%) lived in Ankara, 32 of them (8.3%) in İstanbul, 25 of them (6.5%) in Kocaeli, 22 of them (5.7%) in Sivas, 19 of them (4.9%) in Çanakkale, 18 of them (4.7%) in İzmir, and 26 of them (7.1%) in other twelve different cities from Turkey. The ages of the participants ranged from 18 to 86 (M = 37.11, SD = 14.12).

In terms of education level, 12 participants (3.1%) were primary school graduates, 10 of them (2.6%) were middle school graduates, 92 of them (24%) were high school graduates. 24 of participants (6.3%) had a college degree, 181 of them (47.1%) had bachelor's degree, and 65 of them (16.9%) had master's or doctoral degrees.

Based on the occupational distribution of the sample, 12.8% of the participants (N = 49) were engineers, 12.8% (N = 49) were students, 9.6% (N = 37) were teachers, 6.5% (N = 24) were civil servants, 5% (N = 19) were research assistants, 4.4% (N = 17) were housewives, 4.2% (N = 16) were psychologists, 3.9% (N = 15) were technicians, 3.4% (N = 13) were bankers, 3.2% (N = 12) were academicians, 2.9% (N = 11) were health personnel (e.g. nurse, doctor, etc.), and 2.1% (N = 8) were security personnel (e.g. soldier, guard). 33.7% (N = 103) of the

participants reported that they belonged to different professional groups, and 2.9% (N = 11) did not specify their occupations. Additionally, 254 participants (66.2%) reported as being employed, 66 individuals from the sample (17.2%) were currently unemployed, 46 of them (12%) were retired, and 18 participants (4.7%) never worked before (e.g. housewife).

178 participants (46.4%) stated that they were single while 182 participants (47.4%) reported that they were married. Also, 16 participants (4.2%) declared that they were divorced, and 8 participants (2.1%) were widowed.

Finally, the income level was reported by the participants. 14 individuals in the sample (3.6%) reported themselves as poor, and 41 of them (10.7%) with low-income. 247 participants (64.3%) stated that they are from middle class, 73 of them (19%) from upper-middle class, and 9 of them (2.3) from high class in terms of income level (see Table 1).

Table 1. *Socio-Demographic Characteristics of the Sample (N = 384)*

| | *N* | *%* | *M* | *SD* | Min-Max |
|---|---|---|---|---|---|
| Gender | | | | | |
| Female | 213 | 55.5 | | | |
| Male | 171 | 44.5 | | | |
| Age | 384 | | 37.11 | 14.12 | 18 - 86 |
| City | | | | | |
| Ankara | 242 | 63.0 | | | |
| İstanbul | 32 | 8.3 | | | |
| Kocaeli | 25 | 6.5 | | | |
| Sivas | 22 | 5.7 | | | |
| Çanakkale | 19 | 4.9 | | | |
| İzmir | 18 | 4.7 | | | |
| Others | 26 | 7.1 | | | |

Table 1. *Socio-Demographic Characteristics of the Sample (N = 384)* (continued)

| | *N* | % | *M* | *SD* | Min-Max |
|---|---|---|---|---|---|
| Education | | | | | |
| Primary school | 12 | 3.1 | | | |
| Middle school | 10 | 2.6 | | | |
| High school | 92 | 24 | | | |
| College | 24 | 6.3 | | | |
| Bachelor's | 181 | 47.1 | | | |
| Master's / Doctorate | 65 | 16.9 | | | |
| Occupation | | | | | |
| Engineer | 49 | 12.8 | | | |
| Student | 49 | 12.8 | | | |
| Teacher | 37 | 9.6 | | | |
| Civil servant | 24 | 6.5 | | | |
| Research assistant | 19 | 5.0 | | | |
| Housewife | 17 | 4.4 | | | |
| Psychologist | 16 | 4.2 | | | |
| Technician | 15 | 3.9 | | | |
| Banker | 13 | 3.4 | | | |
| Academician | 12 | 3.2 | | | |
| Health personnel | 11 | 2.9 | | | |
| Security personnel | 8 | 2.1 | | | |
| Unknown | 11 | 2.8 | | | |
| Others | 103 | 33.7 | | | |
| Marital Status | | | | | |
| Single | 178 | 46.4 | | | |
| Married | 182 | 47.4 | | | |
| Divorced | 16 | 4.2 | | | |
| Widowed | 8 | 2.1 | | | |

Table 1. *Socio-Demographic Characteristics of the Sample (N = 384)* (continued)

| | *N* | % | *M* | *SD* | Min-Max |
|---|---|---|---|---|---|
| Employment Status | | | | | |
| Employed | 254 | 66.1 | | | |
| Unemployed | 66 | 17.2 | | | |
| Retired | 46 | 12 | | | |
| Never-worked | 18 | 4.7 | | | |
| Income | | | | | |
| Poor | 14 | 3.6 | | | |
| Low | 41 | 10.6 | | | |
| Middle | 247 | 64.3 | | | |
| Upper-middle | 73 | 19 | | | |
| High | 9 | 2.3 | | | |

## 2.2. Instruments

The instrument pack consisted of the Turkish versions of the Cumulative Trauma Scale-Short Form, The Impact of Event Scale-Revised, The Posttraumatic Growth Inventory, The Social Adaptation Self-Evaluation Scale, and the General Self-Efficacy Scale. The following sections will provide the details of these scales. Additionally, a demographic information form was prepared by the researcher in order to collect information about the participants' sociodemographic characteristics, such as age, gender, home city, education level, marital status, employment status, occupation, and level of income (see Appendix B).

### 2.2.1. Cumulative Trauma Scale-Short Form (CTS-S)

Kira and his colleagues (2008) developed the Cumulative Trauma Scale to assess the cumulative impact of all the traumatic experiences reported by a person. The instrument has 35 items which corresponds to different types of traumas such as attachment traumas, survival traumas, discrimination related traumas, secondary traumas, and so forth. A cumulative trauma score is calculated by including all the

items. Furthermore, the scale can be used to evaluate which events a person has experienced, how many times these events were experienced, at what age each event was experienced, and how the person was affected by this experience at the same time. Thus, each of the 35 items are rated on four parameters, which are occurrence (Yes/No), frequency, age of first experiencing the event and the impact of the event. For the frequency parameter, a 5-point Likert scale is used which ranges between 0 (never) and 4 (many times). In the appraisal parameter, the impact of the event on the person is rated. The impact is evaluated ranging from being negatively or positively affected, using a 7-point Likert-type scale ranging from 1 (extremely positive) to 7 (extremely negative) (see Appendix B). The CTS-S was shown to be a valid and reliable instrument (Kira et al., 2008). Its internal consistency in an adult sample was .85, in male .84 as well as in female samples .85. Also, the test-retest procedure was performed, and it was shown to have almost excellent stability ($r$ = .95) within a 4 weeks interval (Kira et al., 2008; Kira, Fawzi, & Fawzi, 2013). For validity purposes, Kira and his colleagues (2008) conducted an exploratory factor analysis which revealed 6 subscales: collective identity trauma, personal identity trauma, survival trauma, attachment trauma, secondary trauma, and family trauma. In addition, the CTS-Short Form was found to be strongly correlated with the torture severity ($r = .66$, $p < .001$), Backlash trauma scale ($r = .34$, $p < .001$), sociocultural adjustment ($r = -.25$, $p < .001$) and futuristic orientation ($r = -.37$, $p < .001$).

The Turkish adaptation of the CTS-Short Form was conducted for the current study. In order to investigate its validity, four other scales were used which are explained in the following sections. While the Impact of Event Scale-Revised and The Posttraumatic Growth Inventory were used to show its convergent validity, The Social Adaptation Self-Evaluation Scale and General Self-Efficacy Scale were used for discriminant validity testing. The adaptation procedure will be presented in the procedure section.

#### 2.2.2. The Impact of Event Scale-Revised (IES-R)

Weiss and Marmar (1997) developed the Impact of Event Scale-Revised (IES-R) in order to evaluate symptomatic responses of individuals after a traumatic

experience. It is a 22-item scale, using a 5-point Likert response format, rating from 0 (not at all) to 4 (extremely). This instrument has three subscales, which reflect intrusion, avoidance, and hyperarousal. Weiss and Marmar (1997) showed that the subscales have high levels of internal consistency with coefficient alphas ranging from 0.87 to 0.92 for intrusion, 0.84 to 0.85 for avoidance, and 0.79 to 0.90 for hyperarousal. The test-retest reliabilities of the subscales were shown to be between 0.57 and 0.94 for intrusion, 0.51 and 0.89 for avoidance, and 0.59 and 0.92 for hyperarousal.

The adaptation study of the IES-R was conducted by Çorapçıoğlu, Yargıç, Geyran and Kocabaşoğlu (2006). Internal consistency of IES-R was found to be $\alpha = .94$. Moreover, it was shown to be a valid instrument by assessing its correlations with the corresponding scores of Clinician Administered Post Traumatic Stress Disorder Scale (CAPS). Spearman analysis revealed that the total IES-R score ($r = 0.705$, $p < 0.001$), and the subscales which are intrusion ($r = 0.693$, $p < 0.001$), hyperarousal ($r = 0.639$, $p < 0.001$), avoidance ($r = 0.491$, $p < 0.001$) were associated with scores of CAPS. In the current study, Cronbach's α was found as .94 for the entire scale. Also, internal consistency of the three subscales was calculated which are .92 for intrusion, .82 for avoidance, and .90 for hyperarousal (see Appendix D).

#### 2.2.3. The Posttraumatic Growth Inventory (PTGI)

PTGI was developed by Tedeschi and Calhoun (1996), in order to assess the possible positive outcomes reported by individuals after being exposed to traumatic events. It consists of 21 items, which participants rate on a 6-point Likert type scale. The answers range from 0 (I did not experience this change) to 5 (I experienced this change to a very great degree). Factor analysis revealed five subcategories which correspond to *relating to others, new possibilities, personal strength, spiritual change,* and *appreciation of life*. The overall internal consistency of PTGI was found to be $\alpha = .90$, and the test-retest reliability for the scale was indicated as in an acceptable range ($r = .71$). For validity purposes, Marlowe-Crowne Social Desirability Scale and NEO Personality Inventory were administrated to the sample. It was shown that PTGI was not related to social desirability ($r = -.15$, $p < .01$).

Moreover, PTGI was positively correlated with optimism, religiosity, and all the major dimensions of personality, which are openness to experience, conscientiousness, extraversion, agreeableness, except neuroticism.

The first Turkish adaptation study of PTGI was conducted by Kılıç (2005). Kılıç preferred to use a 5-point scale by changing the original format which is a 6-point response format. Also, Dirik and Karancı (2008) provided another Turkish version of the scale by sticking to the original response format yet making small changes in the wording of the items as compared to the Turkish version presented by Kılıç. Research's reliability analysis indicated that internal reliability of the whole scale was quite high (Cronbach's Alpha = .94). Moreover, though the initial factor analysis revealed 4 factors, explaining 64.1% of the total variation, a three-factor solution which explains 59% of the variance was considered as the best solution. That is to say, in the adaptation study conducted by Dirik and Karancı (2008), three factors were detected, and these were labeled as 'relationship with others' (Cronbach's Alpha = 0.86), 'philosophy of life' (Cronbach's Alpha = 0.87) and 'self-perception' (Cronbach's Alpha = 0.88). Internal reliability analysis in the current study found that Cronbach's α is .95 for the entire scale, .92 for self-perception subscale, .87 for philosophy of life subscale, and .88 relationship with others subscale (see Appendix E).

#### 2.2.4. The Social Adaptation Self-Evaluation Scale (SASS)

Bosc, Dubini and Polin (1997) originally developed The Social Adaptation Self-Evaluation Scale (SASS) to evaluate the social motivation and behavior of patients with depression. The scale has 21 items which explore subjective interest in areas of work and leisure, family and extra-family relationships, satisfaction in roles and patient self-perception of his ability to manage and control his environment. It uses a 4-point Likert scale rated between 0 (not at all) and 3 (very). Principal component analysis which was conducted with the data collected from the general population revealed that it has three main factors. Yet, factor 1, carrying most of the variance, was indicated as consequential for all the items in representing the total score. The internal reliability of the scale was shown to be satisfactory

(as Cronbach's α = 0.74), and the test-retest reliability was also acceptable (Cronbach's α = 0.73). To be able to show its validity qualities, face validity and external validity was documented. For the face validity, four subgroups that represent the population sample was created to explore whether all groups have the same understanding of the questionnaire, and statistical analysis revealed that the standard error of the mean between the groups is less than 1 point. To evaluate external validity, the total score of the scale was compared between different socio-professional groups in terms of the mean scores.

The instrument was adapted into the Turkish language and culture by Akkaya, Sarandöl, Esen-Danacı, Sivrioğlu, Kaya and Kırlı (2008). The psychometric properties of the adapted version indicated that it is a reliable and valid scale. That is, internal reliability was shown to be within an acceptable range in both general (α = 0.90) and clinical populations (α = 0.87). Also, the test-retest reliability was found to be 0.77. For the concurrent validity testing, Hamilton Depression Rating Scale (HAM-D) and Global Assessment of Functioning (GAF) Scale were used and both were found to be correlated with the SASS. Although exploratory factor analysis was revealed four factors, all items were collected under factor 1 since the correlation between the items under one factor was found to be high, similar to original study. In the current study, Cronbach's α of the scale was found to be 0.76 which is statistically acceptable (see Appendix F).

#### 2.2.5. General Self-Efficacy Scale (GSE)

General Self-Efficacy Scale (GSE) was originally developed as a 20-item instrument by Jerusalem and Schwarzer (1981) to assess a general sense of perceived self-efficacy in stressful situations. Jerusalem and Schwarzer (1992) revised the items and developed a 10-item scale. It uses 5-point Likert scale response format, which ranges between 0 (not at all true) and 4 (exactly true). This self-report measure was shown to be reliable and valid (Schwarzer & Jerusalem, 1995). For internal reliability, Cronbach's alphas were found to be between .76 and .90. In addition, the General Self-Efficacy Scale positively correlated with optimism and work

satisfaction whereas it had negative correlations with depression, stress, health complaints, and anxiety.

The Turkish adaptation study of the GSES was conducted by Çelikkaleli and Çapri (2008). They showed that it is a reliable instrument since internal validity was found to be quite high as shown by Cronbach's α of .87, and test-retest reliability coefficient was calculated as .92 in four weeks test-retest interval. In factor analysis, GSES was found to be a one-factor scale which explained around % 46 variance. For validity purposes, Aday Öğretmenin Kendine İlişkin Yeterlik İnancı Ölçeği (AÖKİYİÖ), which was developed by Çakır, Erkuş and Kılıç (2004), was administered to participants and the analysis yielded a correlation of .46 between the scales. The Cronbach's alpha for the sample of the current study was calculated as 0.87 (see Appendix G).

### 2.3. Procedure

At the beginning of the present study, the adaptation permission for the Cumulative Trauma Scale was taken from İbrahim Kira, the developer of the instrument. After ethical consent was taken from the Middle East Technical University Human Subjects Ethics Committee (see Appendix I), the translation process was initiated. Two faculty members in the psychology department of the Middle East Technical University translated the scale into Turkish. After translations were completed, one bilingual faculty member in the same department rated the translations based on the suitability and appropriateness of the items by considering the culture. To be able to finalize the adaptation procedure, the researcher added examples into two items to make the meaning understandable and appropriate for the culture by getting permission from the developer of the scale. For instance, for the 3$^{rd}$ item (*I have been involved in or exposed to war or combat*), expression of "terrorist attack" was added to this item, and for the 8$^{th}$ item (*I witnessed a severe assault of acquaintance or stranger (e.g., got shot, stabbed or severely beaten up)*, "got hurt or dead by suicide bombing" was inserted as another example. Before using the scale, a grammar check and meaning check was handled by making individuals with different educational levels read the translated scale and give their feedbacks (see

Appendix C). The final research instrument package consisted of the demographic information form and other instruments of the study described above. All of the scales which were used in the current study were used with the permission from the Turkish adaptors of the instruments. Written informed consent was provided for voluntary participation; thus, the participants were informed about the researcher, the aim of the study, and confidentiality before the instruments were distributed (see Appendix A). In total, 386 adult individuals were reached by snowball sampling technique; that is, initial participants referred other people who may be suitable for the subject of interest. The completion of the instrument booklet took approximately 20 minutes for each participant. Also, the order of the scales was randomized except for the CTS-S, which came just after sociodemographic form, to eliminate the order impact. Entire data were collected over a 7-months period between the dates of March 2018 and October 2018.

### 2.4. Statistical Analyses and Data Coding

The Statistical Package for Social Sciences (SPSS), version 23 for Windows, was used for statistical analyses. Before the analysis, the accuracy of data was examined, and data entry and missing values were evaluated. Missing data were replaced with series mean. Also, the Mahalanobis distance approach was conducted to find multivariate outliers; as a result, two data were excluded.

Coding of the *occurrence, frequency* and *age parameters* were used as similar to the original study. For the occurrence parameter, if the respondent chooses "never", the occurrence was coded as "0", while the occurrence was coded as "1" if the individual selected "once, two times, three times, or many times" on the scale. For the frequency parameter, "never" was coded as "0", "once" as "1", "two times" as "2", "three times" as "3", and "many times" as "4". For the age parameter, the participants' answers were coded as it is. However, a modification was applied for the appraisal parameter. To be able to use positive and negative appraisal scores together for each item and to make these scores comparable, "neutral" was coded as "1" on a 7-point Likert-type scale and it was included both for the negative and positive appraisal calculation. That is to say, for the negative appraisal, "neutral" was

coded as “1”, “somewhat negative” as “2”, “very negative” as “3”, and “extremely negative” as “4”. Also, for the positive appraisal, “extremely positive” was coded as “4”, “very positive” as “3”, “somewhat positive” as “2”, and “neutral” as “1”.

Also, for the analyses, *composite scores* were created by the researcher of the current study. That is, total negative impact and positive impact scores were calculated by using the frequency and appraisal of the items in the CTS-S. These composite scores were labeled as *CTS-S Negative* (the multiplication of the frequency of occurrence and negative appraisal score) and *CTS-S Positive* (the multiplication of the frequency of occurrence and positive appraisal score), which explained in the result section in detail.

In the analysis, firstly, to be able to investigate the occurrence and types of events, descriptive statistics for frequencies of each item were analyzed. Furthermore, with the help of interrater reliability analysis, factor structure was presented, and the internal consistency of the CTS-S was checked by calculating Cronbach’s alpha for subcategories and the entire scale. Finally, concurrent validity of the CTS-S was tested by conducting the correlation analysis for the CTS-S and the Impact of Event Scale-Revised, and the CTS-S and the Posttraumatic Growth Inventory. Also, discriminant validity was checked through examining the correlations between the current scale and the Social Adaptation Self-Evaluation Scale, and General Self-Efficacy Scale.

# CHAPTER 3

# RESULTS

In this section, the results of the statistical analyses will be presented. Firstly, the descriptive statistics for the Turkish version of the Cumulative Trauma Scale-Short Form and the other instruments which were used in the study will be given. Secondly, the factor structure that was found with factor analysis and the interrater reliability analysis based on the ratings of experts working on trauma psychology about the placements of items in the subscales based on the trauma taxonomy will be presented. Finally, the construct validity analyses to examine the psychometric properties of the adapted scale will be given.

## 3.1. Descriptive Statistics

Descriptive features (mean, standard deviation, range of scores) of the Turkish versions of Cumulative Trauma Scale-Short Form, Impact of Event Scale-Revised, Posttraumatic Growth Inventory, Social Adaptation Self-Evaluation Scale, and General Self-Efficacy Scale are presented in Table 2.

In addition to the subscales of occurrence, frequency, negative and positive appraisal, a composite score was calculated by multiplying frequency and appraisal scores to reflect a cumulative trauma score of the CTS-S. The composite score which is the multiplication of the frequency of occurrence and negative appraisal score was named as *CTS-S Negative* (i.e., if a participant reported that he or she experienced an event twice and the appraisal of this event was very negative, the composite score will be 6), while the multiplication of the frequency of occurrence and positive appraisal score was labeled as *CTS-S Positive* (i.e., if a participant reported that he or she experienced an event twice and the appraisal of this event was somewhat positive, the composite score will be 4). These composite scores were used in the analyses. Moreover, age dimension was not included due to missing values.

Table 2. *Descriptive Properties of the Study Variables*

| | N | Mean | SD | Range |
|---|---|---|---|---|
| CTS-S | | | | |
| Occurrence | 384 | 6.64 | 3.75 | 1-23 |
| Male | 171 | 6.86 | 3.86 | 1-23 |
| Female | 213 | 6.47 | 3.66 | 1-20 |
| Frequency | 384 | 13.07 | 9.75 | 0-58 |
| Male | 171 | 14.02 | 10.44 | 1-58 |
| Female | 213 | 12.31 | 9.10 | 0-45 |
| Negative Appraisal | 384 | 16.84 | 10.99 | 0-66 |
| Male | 171 | 16.04 | 11.20 | 0-66 |
| Female | 213 | 17.48 | 10.80 | 1-63 |
| Positive Appraisal | 384 | 1.56 | 2.41 | 0-20 |
| Male | 171 | 2.16 | 3.11 | 0-20 |
| Female | 213 | 1.08 | 1.48 | 0-9 |
| CTS-S Negative | 384 | 34.63 | 28.99 | 0-182 |
| CTS-S Positive | 384 | 2.88 | 5.52 | 0-59 |
| IES-R | 384 | 27.07 | 19.82 | 0-88 |
| PTGI | 384 | 51.58 | 26.64 | 0-105 |
| SASS | 384 | 43.67 | 6.53 | 25-64 |
| GSE | 384 | 29.63 | 6.60 | 10-62 |

*Note.* CTS-S Negative = Frequency x Negative Appraisal; CTS-S Positive = Frequency x Positive Appraisal; CTS-S = Cumulative Trauma Scale-Short Form; IES-R = Impact of Event Scale-Revised; PTGI = Post Traumatic Growth Inventory; SASS = Social Adaptation Self-Evaluation Scale; GSE = General Self-Efficacy Scale.

As can be seen from table 2, the mean number of traumatic events encountered was reported to be 6.64 in the whole sample. Although males ($M$ = 6.86, $SD$ = 3.86) reported slightly more trauma experiences than females ($M$ = 6.47, $SD$ = 3.66), the difference, evaluated by an independent samples t-test was not significant, $t(382) = 1.01$, $p = .31$, $d = 0.10$, 95% CI = [-.37,1.15]. Similarly, independent samples t-tests showed that males and females are not significantly different in terms of the reporting the frequency of traumatic experiences ($t(382) = 1.72$, $p = .09$, $d = 0.17$, 95% CI = [-.24,3.68]) and negative appraisal of traumatic experiences ($t(382) = -1.28$, $p = .20$, $d = 0.13$, 95% CI = [-3.66,.77]).

However, it was found that males (*M* = 2.16, *SD* = 3.11) reported higher positive appraisal of traumas than females (*M* = 1.08, *SD* = 1.48), $t(382) = 4.49$, $p < .001$, $d = 0.44$, 95% CI = [.61,1.56].

Also, independent samples t-test analyses were run to detect group differences in the data. In terms of gender, marital status and employment status, the mean scores of the all instruments were compared. Result of the independent samples t-test regarding the gender comparison showed that the mean score of the CTS-S Positive differs between males (*M* = 4.36, *SD* = 7.50) and females (*M* = 1.70, *SD* = 2.60), $t(382) = 4.83$, $p = .000$, $d = 0.47$, 95% CI = [1.58,3.75]. This result indicated that males have reported more positive appraisal based on the trauma experience as compared to females. Also, the mean social adaptation score was found to be higher in females (*M* = 44.67, *SD* = 6.41) as compared to males (*M* = 42.44, *SD* = 6.48) at the .05 level of significance; $t(382) = -3.37$, $p = .001$, $d = 0.35$, 95% CI = [-3.53,-.93]. On average, females in the study sample are better in social functioning (see Table 3).

Table 3. *Results of t-test and Descriptive Statistics for Scales by Gender*

| | Gender | | | | |
|---|---|---|---|---|---|
| | Male (N = 171) | | Female (N = 213) | | |
| | M | SD | M | SD | t |
| CTS-S Negative | 34.45 | 29.84 | 34.77 | 28.36 | -.11 |
| CTS-S Positive | 4.36 | 7.50 | 1.70 | 2.60 | 4.83** |
| IES-R | 26.70 | 19.88 | 27.37 | 19.81 | -.33 |
| PTGI | 49.43 | 27.39 | 53.31 | 25.96 | -1.42 |
| SASS | 42.44 | 6.48 | 44.67 | 6.41 | -3.37* |
| GSE | 29.94 | 6.64 | 29.38 | 6.58 | .82 |

*Note 1.* CTS-S = Cumulative Trauma Scale-Short Form; IES-R = Impact of Event Scale-Revised; PTGI = Post Traumatic Growth Inventory; SASS = Social Adaptation Self-Evaluation Scale; GSE = General Self-Efficacy Scale.
*Note 2.* ** indicates $p < .001$, * indicates $p < .05$.

Concerning marital status, results from an independent samples t-test indicated that there was a significant difference on the self-efficacy scores between married individuals (M = 30.36, SD = 5.72) and the single ones (*M* = 28.97, *SD* = 7.26), *t*(382) = -2.06, *p* = .040, *d* = 0.21, 95% CI = [-2.71,-.07]. The result based on the study sample suggested that married participants had higher perceived self-efficacy in the face of difficulties as compared to single individuals (see Table 4). Also, independent sample *t*-test was conducted to compare the mean score of the instruments through the demographic variable of employment status. The results revealed that the mean score of the Turkish version of Cumulative Trauma Scale-Short Form, The Impact of Event Scale-Revised, The Posttraumatic Growth Inventory, The Social Adaptation Self-Evaluation Scale, and the General Self-Efficacy Scale did not differ according to the employment status (see Table 5).

Table 4. *Results of t-test and Descriptive Statistics for Scales by Marital Status*

| | Marital Status | | | | |
|---|---|---|---|---|---|
| | Married (N = 182) | | Alone (N = 202) | | |
| | M | SD | M | SD | t |
| CTS-S Negative | 33.39 | 30.66 | 35.74 | 27.42 | -.79 |
| CTS-S Positive | 2.47 | 4.49 | 3.25 | 6.30 | -1.39 |
| IES-R | 25.38 | 18.88 | 28.59 | 20.56 | -1.59 |
| PTGI | 52.74 | 27.99 | 50.54 | 25.38 | .81 |
| SASS | 44.25 | 6.38 | 43.15 | 6.63 | 1.66 |
| GSE | 30.36 | 5.72 | 28.97 | 7.26 | 2.06* |

*Note 1.* Note. CTS-S = Cumulative Trauma Scale-Short Form; IES-R = Impact of Event Scale-Revised; PTGI = Post Traumatic Growth Inventory; SASS = Social Adaptation Self-Evaluation Scale; GSE = General Self-Efficacy Scale.
*Note 2.* * indicates $p < .05$.

Table 5. *Results of t-test and Descriptive Statistics for Scales by Employment Status*

| | Employment Status | | | | |
|---|---|---|---|---|---|
| | Employed (N = 254) | | Unemployed (N = 130) | | |
| | M | SD | M | SD | t |
| CTS-S Negative | 33.90 | 28.97 | 36.05 | 29.08 | -.69 |
| CTS-S Positive | 3.20 | 6.28 | 2.25 | 3.54 | 1.59 |
| IES-R | 27.45 | 19.61 | 26.33 | 20.27 | .52 |
| PTGI | 51.44 | 26.65 | 51.85 | 26.72 | -.14 |
| SASS | 43.66 | 6.64 | 43.70 | 6.32 | -.05 |
| GSE | 29.74 | 6.74 | 29.41 | 6.36 | .47 |

*Note.* CTS-S = Cumulative Trauma Scale-Short Form; IES-R = Impact of Event Scale-Revised; PTGI = Post Traumatic Growth Inventory; SASS = Social Adaptation Self-Evaluation Scale; GSE = General Self-Efficacy Scale.

Examination of the type of events reported by study sample revealed that the traumatic events which are experienced by most of the participants are sudden death of a close friend, or family member (75.5%), natural disaster (74.5%) and nervous breakdown due to daily hassles (45.3%). In contrast, being led to sexual contact by parents (0.5%), being tortured or jailed (2.1%) and being robbed with a weapon (3.4%) are documented as the least likely experienced events by the whole sample. For the male participants, sudden death of a close friend, or family member (72.5%), natural disaster (67.3%) and experiencing accident (57.9%) are the events most likely experienced. Also, being led to sexual contact by parents (0.6%), discriminated against due to gender by family members (1.2%) and being sexually abused or raped (1.8%) are the events that were reported to be experienced least by the male participants of the study. In the female sample, natural disaster experience (80.3%), sudden death of a close one (77.9%) and nervous breakdown due to daily hassles (51.6%) are the most likely experienced events. Yet, being led to sexual contact by parents (0.5%), being tortured or jailed (0.5%) and being robbed with a weapon

(1.9%) are the events that are reported to be experienced by a very small minority of the by female participants (see Table 6).

As seen in the Table 6, some traumatic events are reported to be experienced more by the males and some events more by females. Events like accidents, being tortured, school failures and harming someone are experienced more by males as compared to females whereas natural disasters, losing own child and being discriminated against due to gender and race are the events experienced more by females than males. To be able to see whether males' and females' experiences are statistically different from each other, the 2x2 Chi-square tests were conducted. As expected, females and males were found to be experienced for some of the events differently. Analysis revealed that males reported significantly more experiencing accidents, $\chi^2$ (1, N = 384) = 20.54, $p$ < .001, $\phi^2$ = .23, physically assaulted by someone older, $\chi^2$ (1, N = 384) = 28.13, $p$ < .001, $\phi^2$ = .27, harming someone, $\chi^2$ (1, N = 384) = 13.41, $p$ < .001, $\phi^2$ = .19, and living in violent neighborhood, $\chi^2$ (1, N = 384) = 12.85, $p$ < .001, $\phi^2$ = .20. Also, analysis indicated that females experienced significantly more discrimination due to gender by society or institutions, $\chi^2$ (1, N = 384) = 18.55, $p$ < .001, $\phi^2$ = .22, and discrimination due to gender by family members, $\chi^2$ (1, N = 384) = 13.58, $p$ < .001, $\phi^2$ = .19.

Table 7 provides descriptive statistics of the Turkish version of CTS-S. Analysis revealed that the most frequently experienced events by the whole sample, sudden death of a close one (M = 1.59, SD = 1.39), natural disaster (M = 1.57, SD = 1.37) and nervous breakdown due to daily hassles (M = 1.10, SD = 1.48), respectively. In females, the most frequently experienced events were natural disasters (M = 1.56, SD = 1.34), sudden death of a loved one (M = 1.56, SD = 1.34) and nervous breakdown (M = 1.21, SD = 1.49). In contrast, in males, the order has changed as sudden death of a close one (M = 1.64, SD = 1.45), natural disaster (M = 1.40, SD = 1.37) and school failures (M = 0.98, SD = 1.51).

Table 6. *Frequency and Percentages of the Traumatic Events (Occurrence)*

| Traumatic Event | Male (N = 171) | Female (N = 213) | Total (N = 384) |
|---|---|---|---|
| 1. Natural disaster experience | 115 (67.3) | 171 (80.3) | 286 (74.5) |
| 2. Accident experience | 99 (57.9)* | 74 (34.7) | 173 (45.1) |
| 3. Warfare, terrorist attack experience | 18 (10.5) | 31 (14.6) | 49 (12.8) |
| 4. Sudden death of a close friend, or family member | 124 (72.5) | 166 (77.9) | 290 (75.5) |
| 5. Life-threatening event that happened to a close one | 63 (36.8) | 100 (46.9) | 163 (42.2) |
| 6. Had a life-threatening illness | 39 (22.8) | 41 (19.2) | 80 (20.8) |
| 7. Experienced robbery with a weapon | 9 (5.3) | 4 (1.9) | 13 (3.4) |
| 8. Witnessed severe assault of an acquaintance | 50 (29.2) | 43 (20.2) | 93 (24.2) |
| 9. Threatened to be killed | 32 (18.7) | 17 (8.0) | 49 (12.8) |
| 10. Physically abused by a caregiver | 13 (7.6) | 9 (4.2) | 22 (5.7) |
| 11. Witnessed own family violence | 25 (14.6) | 29 (13.6) | 54 (14.1) |
| 12. Led to sexual contact by someone older | 6 (3.5) | 9 (4.2) | 15 (3.9) |
| 13. Sexual abuse or rape | 3 (1.8) | 16 (7.5) | 19 (4.9) |
| 14. Tortured or jailed | 7 (4.1) | 1 (0.5) | 8 (2.1) |
| 15. Been abandoned by mother | 6 (3.5) | 9 (4.2) | 15 (3.9) |
| 16. Been abandoned by father | 8 (4.7) | 20 (9.4) | 28 (7.3) |
| 17. Discriminated against due to race | 30 (17.5) | 33 (15.5) | 63 (16.4) |
| 18. Parental divorce | 14 (8.2) | 27 (12.7) | 41 (10.7) |
| 19. Oppression or genocide in the history of own race | 35 (20.5) | 38 (17.8) | 73 (19.0) |
| 20. Experienced nervous breakdown due to hassles | 64 (37.4) | 110 (51.6) | 174 (45.3) |
| 21. Warfare experienced by a family member | 8 (4.7) | 9 (4.2) | 17 (4.4) |
| 22. School failures | 66 (38.6) | 56 (26.3) | 122 (31.8) |

Table 6. *Frequency and Percentages of the Traumatic Events (Occurrence)* (continued)

| Traumatic Event | Male (N = 171) | Female (N = 213) | Total (N = 384) |
|---|---|---|---|
| 23. Forced migration | 14 (8.2) | 15 (7.0) | 29 (7.6) |
| 24. Physically assaulted by someone older | 50 (29.2)* | 18 (8.5) | 68 (17.7) |
| 25. Led to sexual contact by parents | 1 (0.6) | 1 (0.5) | 2 (0.5) |
| 26. Discriminated against due to gender by society or institutions | 5 (2.9) | 35 (16.4)* | 40 (10.4) |
| 27. Relationship failures | 47 (27.5) | 60 (28.2) | 107 (27.9) |
| 28. Losing a child | 7 (4.1) | 15 (7.0) | 22 (5.7) |
| 29. Being fired | 25 (14.6) | 31 (14.6) | 56 (14.6) |
| 30. Remarried | 7 (4.1) | 8 (3.8) | 15 (3.9) |
| 31. Living in poor conditions | 86 (50.3) | 80 (37.6) | 166 (43.2) |
| 32. Discriminated against due to gender by family members | 2 (1.2) | 22 (10.3)* | 24 (6.3) |
| 33. Harming someone | 27 (15.8)* | 10 (4.7) | 37 (9.6) |
| 34. Living in violent neighborhood | 34 (19.9)* | 14 (6.6) | 48 (12.5) |
| 35. Complicated birth | 34 (19.9) | 56 (26.3) | 90 (23.4) |

*Note:* * indicates $p < .001$.

Table 7. *Mean, Standard Deviation (SD), and Frequency of Each Item per Gender and Total*

| | | | | Frequency of Occurrence | | | | |
|---|---|---|---|---|---|---|---|---|
| Item | Gender | *M* | *SD* | 0 | 1 | 2 | 3 | 4+ |
| 1. Natural disaster experience | Male | 1.40 | 1.37 | 56 | 49 | 31 | 11 | 24 |
| | Female | 1.70 | 1.37 | 42 | 75 | 39 | 19 | 38 |
| | Total | 1.57 | 1.37 | | | | | |
| 2. Accident experience | Male | 0.87 | 0.98 | 72 | 67 | 21 | 5 | 6 |
| | Female | 0.47 | 0.79 | 139 | 56 | 13 | 1 | 4 |
| | Total | 0.65 | 0.90 | | | | | |
| 3. Warfare, terrorist attack experience | Male | 0.25 | 0.85 | 153 | 8 | 3 | 0 | 7 |
| | Female | 0.19 | 0.52 | 182 | 24 | 6 | 0 | 1 |
| | Total | 0.21 | 0.68 | | | | | |
| 4. Sudden death of a close friend, or family member | Male | 1.64 | 1.45 | 47 | 48 | 29 | 14 | 33 |
| | Female | 1.56 | 1.34 | 47 | 83 | 34 | 15 | 34 |
| | Total | 1.59 | 1.39 | | | | | |
| 5. Life-threatening event that happened to a close one | Male | 0.68 | 1.11 | 108 | 32 | 18 | 3 | 10 |
| | Female | 0.74 | 1.02 | 113 | 67 | 17 | 7 | 9 |
| | Total | 0.72 | 1.07 | | | | | |
| 6. Had a life-threatening illness | Male | 0.30 | 0.66 | 132 | 32 | 4 | 1 | 2 |
| | Female | 0.25 | 0.63 | 172 | 34 | 4 | 0 | 3 |
| | Total | 0.27 | 0.64 | | | | | |
| 7. Experienced robbery with a weapon | Male | 0.06 | 0.29 | 162 | 7 | 2 | 0 | 0 |
| | Female | 0.03 | 0.30 | 209 | 3 | 0 | 0 | 1 |
| | Total | 0.05 | 0.29 | | | | | |
| 8. Witnessed severe assault of an acquaintance | Male | 0.63 | 1.20 | 121 | 24 | 7 | 6 | 13 |
| | Female | 0.39 | 1.36 | 170 | 27 | 11 | 4 | 1 |
| | Total | 0.50 | 1.30 | | | | | |
| 9. Threatened to be killed | Male | 0.32 | 0.80 | 139 | 20 | 6 | 2 | 4 |
| | Female | 0.13 | 0.54 | 196 | 13 | 1 | 0 | 3 |
| | Total | 0.21 | 0.67 | | | | | |

Table 7. *Mean, Standard Deviation (SD), and Frequency of Each Item Per Gender and Total* (continued)

| | | | | Frequency of Occurrence | | | | |
|---|---|---|---|---|---|---|---|---|
| Item | Gender | *M* | *SD* | 0 | 1 | 2 | 3 | 4+ |
| 10. Physically abused by a caregiver | Male | 0.25 | 0.95 | 158 | 3 | 0 | 0 | 10 |
| | Female | 0.13 | 0.66 | 204 | 2 | 1 | 1 | 5 |
| | Total | 0.18 | 0.80 | | | | | |
| 11. Witnessed own family violence | Male | 0.36 | 1.02 | 146 | 11 | 3 | 0 | 11 |
| | Female | 0.34 | 1.01 | 184 | 14 | 1 | 0 | 14 |
| | Total | 0.35 | 1.02 | | | | | |
| 12. Led to sexual contact by someone older | Male | 0.07 | 0.43 | 165 | 3 | 1 | 1 | 1 |
| | Female | 0.09 | 0.48 | 204 | 5 | 1 | 1 | 2 |
| | Total | 0.08 | 0.46 | | | | | |
| 13. Sexual abuse or rape | Male | 0.02 | 0.13 | 168 | 3 | 0 | 0 | 0 |
| | Female | 0.13 | 0.56 | 197 | 10 | 3 | 0 | 3 |
| | Total | 0.08 | 0.43 | | | | | |
| 14. Tortured or jailed | Male | 0.06 | 0.36 | 164 | 6 | 0 | 0 | 1 |
| | Female | 0.01 | 0.07 | 212 | 1 | 0 | 0 | 0 |
| | Total | 0.03 | 0.24 | | | | | |
| 15. Been abandoned by mother | Male | 0.05 | 0.35 | 165 | 5 | 0 | 0 | 1 |
| | Female | 0.08 | 0.45 | 204 | 5 | 2 | 0 | 2 |
| | Total | 0.07 | 0.41 | | | | | |
| 16. Been abandoned by father | Male | 0.14 | 0.70 | 163 | 2 | 1 | 0 | 5 |
| | Female | 0.23 | 0.82 | 193 | 9 | 2 | 1 | 8 |
| | Total | 0.19 | 0.77 | | | | | |
| 17. Discriminated against due to race | Male | 0.49 | 1.21 | 141 | 11 | 2 | 0 | 17 |
| | Female | 0.43 | 1.15 | 180 | 10 | 5 | 0 | 18 |
| | Total | 0.46 | 1.18 | | | | | |
| 18. Parental divorce | Male | 0.11 | 0.42 | 157 | 12 | 1 | 0 | 1 |
| | Female | 0.15 | 0.46 | 186 | 25 | 0 | 1 | 1 |
| | Total | 0.13 | 0.44 | | | | | |

Table 7. *Mean, Standard Deviation (SD), and Frequency of Each Item Per Gender and Total* (continued)

| | | | | Frequency of Occurrence | | | | |
|---|---|---|---|---|---|---|---|---|
| Item | Gender | *M* | *SD* | 0 | 1 | 2 | 3 | 4+ |
| 19. Oppression or genocide in the history of own race | Male | 0.63 | 1.33 | 136 | 3 | 8 | 7 | 17 |
| | Female | 0.50 | 1.19 | 175 | 6 | 12 | 3 | 17 |
| | Total | 0.56 | 1.25 | | | | | |
| 20. Experienced nervous breakdown due to hassles | Male | 0.95 | 1.47 | 107 | 22 | 11 | 6 | 25 |
| | Female | 1.21 | 1.49 | 103 | 40 | 28 | 6 | 36 |
| | Total | 1.10 | 1.48 | | | | | |
| 21. Warfare experienced by a family member | Male | 0.08 | 0.47 | 163 | 6 | 0 | 0 | 2 |
| | Female | 0.07 | 0.42 | 204 | 7 | 0 | 0 | 2 |
| | Total | 0.08 | 0.44 | | | | | |
| 22. School failures | Male | 0.98 | 1.51 | 105 | 24 | 11 | 2 | 29 |
| | Female | 0.55 | 1.11 | 157 | 28 | 9 | 6 | 13 |
| | Total | 0.74 | 1.32 | | | | | |
| 23. Forced migration | Male | 0.18 | 0.71 | 157 | 8 | 1 | 0 | 5 |
| | Female | 0.13 | 0.59 | 198 | 10 | 1 | 0 | 4 |
| | Total | 0.15 | 0.65 | | | | | |
| 24. Physically assaulted by someone older | Male | 0.62 | 1.19 | 121 | 24 | 10 | 2 | 14 |
| | Female | 0.22 | 0.82 | 195 | 7 | 2 | 1 | 8 |
| | Total | 0.40 | 1.02 | | | | | |
| 25. Led to sexual contact by parents | Male | 0.01 | 0.08 | 170 | 1 | 0 | 0 | 0 |
| | Female | 0.02 | 0.27 | 212 | 0 | 0 | 0 | 1 |
| | Total | 0.01 | 0.21 | | | | | |
| 26. Discriminated against due to gender by society or institutions | Male | 0.12 | 0.68 | 166 | 0 | 0 | 0 | 5 |
| | Female | 0.50 | 1.26 | 178 | 10 | 1 | 1 | 23 |
| | Total | 0.33 | 1.06 | | | | | |
| 27. Relationship failures | Male | 0.61 | 1.19 | 124 | 20 | 10 | 4 | 13 |
| | Female | 0.55 | 1.08 | 153 | 31 | 13 | 4 | 12 |
| | Total | 0.58 | 1.13 | | | | | |

Table 7. *Mean, Standard Deviation (SD), and Frequency of Each Item Per Gender and Total* (continued)

| | | | | Frequency of Occurrence | | | | |
|---|---|---|---|---|---|---|---|---|
| Item | Gender | *M* | *SD* | 0 | 1 | 2 | 3 | 4+ |
| 28. Losing a child | Male | 0.08 | 0.42 | 164 | 3 | 3 | 0 | 1 |
| | Female | 0.09 | 0.34 | 198 | 13 | 1 | 1 | 0 |
| | Total | 0.08 | 0.38 | | | | | |
| 29. Being fired | Male | 0.23 | 0.65 | 146 | 14 | 8 | 2 | 1 |
| | Female | 0.21 | 0.61 | 182 | 24 | 4 | 0 | 3 |
| | Total | 0.22 | 0.63 | | | | | |
| 30. Remarried | Male | 0.04 | 0.20 | 164 | 7 | 0 | 0 | 0 |
| | Female | 0.04 | 0.19 | 205 | 8 | 0 | 0 | 0 |
| | Total | 0.04 | 0.19 | | | | | |
| 31. Living in poor conditions | Male | 0.67 | 0.82 | 85 | 67 | 11 | 7 | 1 |
| | Female | 0.46 | 0.68 | 133 | 68 | 8 | 3 | 1 |
| | Total | 0.55 | 0.75 | | | | | |
| 32. Discriminated against due to gender by family members | Male | 0.03 | 0.32 | 169 | 1 | 0 | 0 | 1 |
| | Female | 0.32 | 1.02 | 191 | 4 | 3 | 2 | 13 |
| | Total | 0.19 | 0.80 | | | | | |
| 33. Harming someone | Male | 0.52 | 1.29 | 144 | 4 | 3 | 1 | 19 |
| | Female | 0.07 | 0.38 | 203 | 7 | 2 | 0 | 1 |
| | Total | 0.27 | 0.93 | | | | | |
| 34. Living in violent neighborhood | Male | 0.46 | 1.23 | 137 | 17 | 2 | 2 | 13 |
| | Female | 0.09 | 0.45 | 199 | 12 | 0 | 0 | 2 |
| | Total | 0.26 | 0.84 | | | | | |
| 35. Complicated birth | Male | 0.37 | 0.88 | 137 | 15 | 12 | 3 | 4 |
| | Female | 0.47 | 0.92 | 157 | 29 | 15 | 8 | 4 |
| | Total | 0.43 | 0.90 | | | | | |
| Cumulative Trauma Total | Male | 14.02 | 10.44 | | | | | |
| | Female | 12.31 | 9.11 | | | | | |
| | Total | 13.07 | 9.75 | | | | | |

### 3.2. Reliability and Validity Analyses of the CTS-S

Traditional ways to investigate psychometric properties of a scale is to conduct reliability and validity analysis. At first, factor analysis and interrater reliability analysis were performed to examine how much precise the items and subscales of the CTS-S are as well as to show the factor structure of the adapted scale. The internal consistency reliability of the CTS-S was checked for subcategories and the entire scale to show relatedness of the items. Later, analysis of concurrent validity to show CTS-S relatedness with the scale measuring negative impacts of trauma and the discriminant validity to examine how the CTS-S is distinct from some concepts were conducted and presented in detail in the following sections.

#### 3.2.1. Factor Analysis

Exploratory and confirmatory factor analyses are required for evaluating validity in adaptation studies. However, in the case of cumulative trauma, the nature of the items does not seem to be suitable to hypothesize a grouping of traumatic experiences. In other words, it is difficult to expect that the experiencing one type of event brings about the experience of the other event. Indeed, for the same reason, the related literature does not recommend using factor analysis for similar scales (Hooper, Stockton, Krupnick, & Green, 2011). Nevertheless, since the exploratory factor analysis was presented in the original study, the current study also examined the factor structure of the adapted scale.

An exploratory factor analysis with the appraisal scores was conducted by using principle axis factoring method and direct oblimin rotation. Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .64, which is slightly above the recommended value. Also, Bartlett's test of sphericity was found to be significant ($\chi^2$ (595) = 2880.98, $p < .001$), which is indicated the suitability for factor analysis of the scale. The analysis revealed a 5-factor structure based on the eigenvalues that were greater than value 1, and the scree plot. However, according to the factor structure matrix, some of the loaded items under the factors were not found to be related in terms of the content and some items were not loaded to a category at all.

Thus, the factor analysis did not reveal meaningful results for some categories with related items and the Cronbach's alphas of these categories were found to be considerably low. Due to discrepant results obtained from the factor analysis in the current study and the original study, the opinions of the experts in the trauma field was requested. In the next section, interrater reliability analysis was displayed.

### 3.2.2. Interrater Reliability Analysis

For the reliability purposes, interrater reliability was assessed by asking four experts on the subject of trauma to place items in categories. Based on Kira's trauma taxonomy, Developmentally-Based Trauma Framework, and preliminary results which were obtained from the factor analysis, 5 subscales were defined and provided to the trauma experts. They were asked to place each item in categories that they found appropriate. These categories were survival trauma (natural cause), survival trauma (manmade cause), personal identity trauma, collective identity trauma, and family-attachment traumas (see Appendix H).

Category 1, S*urvival Trauma (natural cause) Subscale*, includes the traumas which threaten the physical integrity of the individuals and is not related to human influence while the category 2, *Survival Trauma (manmade cause) Subscale*, contains the traumatic events caused by humans that have an impact on the physical integrity of the exposed person. These traumas can be both experienced directly or can be witnessed when other people were exposed. Category 3 was labeled as *Personal Identity Trauma Subscale* and was explained as the traumas which have an inverse impact on the identity creation process of individuals by harming the sense of belongingness, autonomy and the power to reach personal ideals. Category 4 defined as *Collective Identity Trauma Subscal*e included events targeting the individuals', groups' or societies' color, religion or ethnicity, and the inequality and oppression in a society. These traumas generally can be transmitted between generations. Finally, category 5, *Family-Attachment Trauma Subscale*, was defined as the traumatic events including abusive or stressful relationships with significant others (e.g. parents or partners) which affects feelings of safety.

The interrater reliability analysis showed that the percent of agreement among the four raters for all subscales in the CTS-S ranged between 45.7% and 82.9%. To be able to discuss the agreement between the raters in statistical terms, Cohen's kappa statistics were calculated between the two raters. The result revealed that the agreement between the raters were statistically significant ($\kappa$ = [0.33, 0.77]); yet, the agreement ranged between fair to substantial (see Table 8).

Furthermore, Fleiss's Kappa statistics were calculated since the study includes multiple raters and categories. The analysis based on the raters' agreement about the subscales revealed that Fleiss Kappa was .51 for Survival Trauma (Natural Cause) Subscale, .59 for Survival Trauma (Man-made Cause) Subscale, .47 for Personal Identity Trauma Subscale, .52 for Collective Identity Trauma Subscale, and .42 for Family-Attachment Trauma Subscale. This result indicated that the strength of the agreement between the four raters for the subscales is fair to good, which is the indication of the moderate agreement (see Table 9).

Based on the Fleiss' Kappa and agreement of the raters, the Survival Trauma (Natural Cause) Subscale contained only item 1. The Survival Trauma (Man-made Cause) Subscale included items of 2, 3, 7, 8, 9, 14, 21, and 24. While the Personal Identity Trauma Subscale is consisted of items 10, 20, 22, 25, 27, 29, 30, 31, 33, and 35, the Collective Identity Trauma Subscale included items of 17, 19, 23, 26, 32, and 34. The Family-Attachment Trauma Subscale contained items 11, 15, 16, and 18.

Based on the results of interrater reliability analysis, 18 items in total were found to be in the categories as similar to the original study. Item 1, item 2, item 3, item 6, item 7 and item 9 were decided as related to the survival traumas. Items like 10, 22, 25, 27, and 29 were placed under the category of personal identity trauma. Item 17, item 19, item 26, item 32, and item 34 were categorized as collective identity trauma. Item 15 and item 16 were labeled as family-attachment traumas.

Table 8. *Agreement between Raters*

| Items | R1-R2 | R1-R3 | R1-R4 | R2-R3 | R2-R4 | R3-R4 |
|---|---|---|---|---|---|---|
| **Item 1** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Item 2** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Item 3** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Item 4** | 0 | 1 | 0 | 0 | 1 | 0 |
| **Item 5** | 0 | 1 | 0 | 0 | 1 | 0 |
| **Item 6** | 0 | 1 | 0 | 0 | 1 | 0 |
| **Item 7** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Item 8** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Item 9** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Item 10** | 0 | 1 | 0 | 0 | 0 | 0 |
| **Item 11** | 0 | 0 | 1 | 0 | 0 | 0 |
| **Item 12** | 0 | 1 | 0 | 0 | 1 | 0 |
| **Item 13** | 0 | 1 | 0 | 0 | 1 | 0 |
| **Item 14** | 1 | 0 | 1 | 0 | 1 | 0 |
| **Item 15** | 0 | 1 | 1 | 0 | 0 | 1 |
| **Item 16** | 0 | 1 | 1 | 0 | 0 | 1 |
| **Item 17** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Item 18** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Item 19** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Item 20** | 0 | 1 | 1 | 0 | 0 | 1 |
| **Item 21** | 1 | 0 | 1 | 0 | 1 | 0 |
| **Item 22** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Item 23** | 0 | 1 | 0 | 0 | 1 | 0 |
| **Item 24** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Item 25** | 0 | 0 | 1 | 0 | 0 | 0 |
| **Item 26** | 0 | 1 | 1 | 0 | 0 | 1 |
| **Item 27** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Item 28** | 0 | 1 | 0 | 0 | 1 | 0 |
| **Item 29** | 1 | 1 | 1 | 1 | 1 | 1 |
| **Item 30** | 0 | 0 | 1 | 0 | 0 | 0 |
| **Item 31** | 1 | 1 | 1 | 1 | 0 | 1 |
| **Item 32** | 0 | 0 | 1 | 0 | 0 | 0 |
| **Item 33** | 1 | 1 | 0 | 1 | 0 | 0 |
| **Item 34** | 0 | 1 | 0 | 0 | 0 | 0 |
| **Item 35** | 1 | 1 | 1 | 1 | 1 | 1 |

Table 8. *Agreement between Raters* (continued)

| | R1-R2 | R1-R3 | R1-R4 | R2-R3 | R2-R4 | R3-R4 |
|---|---|---|---|---|---|---|
| **% of Agreement** | 51.4 | 82.9 | 71.4 | 45.7 | 68.6 | 54.3 |
| **Kappa** | .38* | .77* | .63* | .33* | .58* | .42* |

*Note.* * *indicates p < .001; agreement of raters: 1, disagreement of raters: 0*

It was found that the decision of the raters was not parallel with the founder of the scale in the categorization of some items. Item 8 (*witnessed severe assault of an acquaintance*) and item 21 (*warfare experienced by a family member*) were originally represented in the secondary trauma category; however, in the current study, there were no such category and these items were placed under the survival traumas. In terms of the content, these two items were suitable to the survival trauma category since severe physical assaults were mentioned. Item 14 (*tortured or jailed*) was labeled as collective identity trauma in the original study; yet, raters of the present study placed this item under the survival traumas. Similarly, item 24 (*physically assaulted by someone older*) was considered as a personal identity trauma originally, and as a survival trauma by the raters of the study. When reviewing the contents of these items, the result obtained from the trauma experts was considered to be more accurate because the items connotes more likely a danger to the physical integrity of the person. Furthermore, item 18 (*parental divorce*) and item 11 (*witnessed own family violence*) were regarded as a secondary trauma by Kira and his colleagues (2008); however, in the current study, raters decided that these items are related to the Family-Attachment Trauma Subscale. Lastly, while item 31 (*living in poor conditions*) was originally a collective trauma, raters labeled this item as Personal Identity Trauma. Considering the Turkish context, placing this item to the category of Personal Identity Trauma was more suitable since it is more related to the financial constraints than being a part of disadvantaged group in the society. Therefore, the interrater agreement was accepted when there were discrepancy between the trauma experts in the Turkish culture and the founder of the original scale.

As presented in table 9, items such as 4, 5, 6, 12, 13, 23 and 28 were not categorized to any specific subscale due to the indecisiveness of the raters. Since item 12 (*led to sexual contact by someone older*) and item 13 (*sexual abuse or rape*) were originally assigned to the Personal Identity Trauma Subscale, the researcher of the current study also placed these items into the same category. Likewise, because item 23 (*forced migration*) was originally categorized under the Collective Identity Trauma Subscale and item 6 (*had a life-threatening illness*) under the Survival Trauma Subscale, these were accepted under the corresponding categories for the adapted version of the instrument. Moreover, item 4 (*sudden death of a close friend, or family member*), item 5 (*life-threatening event that happened to a close one*) and item 28 (*losing a child*) were categorized as secondary traumas in the original study. In the current study, since there was not a category labeled secondary traumas and the content of these items are about the death or a deadly injury to a closed person, the researcher of the present study decided to place these items in the Family-Attachment Trauma Subscale.

In the original study, there were several items such as item 20 (*experienced nervous breakdown due to hassles*), item 30 (*remarried*), item 33 (*harming someone*), and item 35 (*complicated birth*) which were not categorized under the existing subscales. According to the results obtained from raters, these items were placed in the Personal Identity Trauma Subscale.

All in all, since there were two items under Survival Trauma (Natural Cause) Subscale and these items were conceptually not different from Survival Trauma (Man-made Cause) Subscale, these two categories were combined and labeled as Survival Trauma Subscale. That is to say, four-factor structure was accepted and the subscales were defined as Survival Trauma, Personal Identity Trauma, Collective Identity Trauma and Family-Attachment Trauma. Survival Trauma Subscale includes item 1, 2, 3, 6, 7, 8, 9, 14, 21 and 24. Personal Identity Trauma Subscale contains item 10, 12, 13, 20, 22, 25, 27, 29, 30, 31, 33 and 35. Collective Identity Trauma Subscale includes item 17, 19, 23, 26, 32 and 34. Family-Attachment Trauma Subscale is formed by item 4, 5, 11, 15, 16, 18 and 28 (see Table 10).

Table 9. *Distribution of Raters by Subject and Response Category*

| Items | Categories | | | | |
|---|---|---|---|---|---|
| | 1<br>Survival Trauma<br>(Natural Cause) | 2<br>Survival Trauma<br>(Man-made Cause) | 3<br>Personal Identity<br>Trauma | 4<br>Collective Identity<br>Trauma | 5<br>Family-Attachment<br>Trauma |
| Item 1 | 4 | 0 | 0 | 0 | 0 |
| Item 2 | 0 | 4 | 0 | 0 | 0 |
| Item 3 | 0 | 4 | 0 | 0 | 0 |
| Item 4 | 2 | 0 | 0 | 0 | 2 |
| Item 5 | 2 | 0 | 0 | 0 | 2 |
| Item 6 | 2 | 0 | 2 | 0 | 0 |
| Item 7 | 0 | 4 | 0 | 0 | 0 |
| Item 8 | 0 | 4 | 0 | 0 | 0 |
| Item 9 | 0 | 4 | 0 | 0 | 0 |
| Item 10 | 0 | 1 | 2 | 0 | 1 |
| Item 11 | 0 | 1 | 1 | 0 | 2 |
| Item 12 | 0 | 2 | 2 | 0 | 0 |
| Item 13 | 0 | 2 | 2 | 0 | 0 |
| Item 14 | 0 | 3 | 0 | 1 | 0 |
| Item 15 | 0 | 0 | 1 | 0 | 3 |
| Item 16 | 0 | 0 | 1 | 0 | 3 |
| Item 17 | 0 | 0 | 0 | 4 | 0 |
| Item 18 | 0 | 0 | 0 | 0 | 4 |
| Item 19 | 0 | 0 | 0 | 4 | 0 |

Table 9. *Distribution of Raters by Subject and Response Category* (continued)

| Items | Categories | | | | |
|---|---|---|---|---|---|
| | 1<br>Survival Trauma<br>(Natural Cause) | 2<br>Survival Trauma<br>(Man-made Cause) | 3<br>Personal Identity<br>Trauma | 4<br>Collective<br>Identity Trauma | 5<br>Family-Attachment<br>Trauma |
| Item 20 | 0 | 0 | 3 | 0 | 0 |
| Item 21 | 0 | 3 | 0 | 1 | 0 |
| Item 22 | 0 | 0 | 4 | 0 | 0 |
| Item 23 | 0 | 2 | 0 | 2 | 0 |
| Item 24 | 0 | 4 | 0 | 0 | 0 |
| Item 25 | 0 | 1 | 2 | 0 | 1 |
| Item 26 | 0 | 0 | 1 | 3 | 0 |
| Item 27 | 0 | 0 | 4 | 0 | 0 |
| Item 28 | 2 | 0 | 0 | 0 | 2 |
| Item 29 | 0 | 0 | 4 | 0 | 0 |
| Item 30 | 0 | 0 | 2 | 0 | 1 |
| Item 31 | 0 | 0 | 4 | 0 | 0 |
| Item 32 | 0 | 1 | 1 | 2 | 0 |
| Item 33 | 0 | 1 | 3 | 0 | 0 |
| Item 34 | 0 | 1 | 1 | 2 | 0 |
| Item 35 | 0 | 0 | 4 | 0 | 0 |
| Fleiss Kappa | .51* | .59* | .47* | .52* | .42* |

*Note. * indicates* $p < .001$

Table 10. *Items of the Subscales*

<table>
<tr><td rowspan="10">Survival Trauma</td><td>1. Natural disaster experience</td></tr>
<tr><td>2. Accident experience</td></tr>
<tr><td>3. Warfare, terrorist attack experience</td></tr>
<tr><td>6. Had a life-threatening illness</td></tr>
<tr><td>7. Experienced robbery with a weapon</td></tr>
<tr><td>8. Witnessed severe assault of an acquaintance</td></tr>
<tr><td>9. Threatened to be killed</td></tr>
<tr><td>14. Tortured or jailed</td></tr>
<tr><td>21. Warfare experienced by a family member</td></tr>
<tr><td>24. Physically assaulted by someone older</td></tr>
<tr><td rowspan="12">Personal Identity Trauma</td><td>10. Physically abused by a caregiver</td></tr>
<tr><td>12. Led to sexual contact by someone older</td></tr>
<tr><td>13. Sexual abuse or rape</td></tr>
<tr><td>20. Experienced nervous breakdown due to hassles</td></tr>
<tr><td>22. School failures</td></tr>
<tr><td>25. Led to sexual contact by parents</td></tr>
<tr><td>27. Relationship failures</td></tr>
<tr><td>29. Being fired</td></tr>
<tr><td>30. Remarried</td></tr>
<tr><td>31. Living in poor conditions</td></tr>
<tr><td>33. Harming someone</td></tr>
<tr><td>35. Complicated birth</td></tr>
<tr><td rowspan="6">Collective Identity Trauma</td><td>17. Discriminated against due to race</td></tr>
<tr><td>19. Oppression or genocide in the history of own race</td></tr>
<tr><td>23. Forced migration</td></tr>
<tr><td>26. Discriminated against due to gender by society or institutions</td></tr>
<tr><td>32. Discriminated against due to gender by family members</td></tr>
<tr><td>34. Living in violent neighborhood</td></tr>
<tr><td rowspan="7">Family-Attachment Trauma</td><td>4. Sudden death of a close friend, or family member</td></tr>
<tr><td>5. Life-threatening event that happened to a close one</td></tr>
<tr><td>11. Witnessed own family violence</td></tr>
<tr><td>15. Been abandoned by mother</td></tr>
<tr><td>16. Been abandoned by father</td></tr>
<tr><td>18. Parental divorce</td></tr>
<tr><td>28. Losing a child</td></tr>
</table>

Additionally, the means of negative and positive appraisal scores of the categories were calculated. According to the descriptive statistics, it was found that the Survival Trauma, Personal Identity Trauma and Collective Identity Trauma categories had approximately the similar mean scores both for the positive appraisal and the negative appraisal. However, within four subscales, the highest mean score of negative appraisal was found for the Family-Attachment Trauma Subscale. Similarly, the category with the lowest mean score for positive appraisal was the Family-Attachment Trauma Scale. As a result, it was indicated that the items, which were most negatively evaluated and the most influential with their adverse impacts, were family traumas among the four categories (see Table 11).

Table 11. *Mean Appraisal Scores of Subscales*

| Subscales | *M* | |
|---|---|---|
| | Positive | Negative |
| Survival Trauma Subscale | 1.34 | 2.68 |
| Personal Identity Trauma Subscale | 1.42 | 2.57 |
| Collective Identity Trauma Subscale | 1.29 | 2.66 |
| Family-Attachment Trauma Subscale | 0.99 | 3.30 |

### 3.2.3. Internal Reliability Analysis

Cronbach's alpha coefficients were calculated to examine the consistency among items of the CTS-S and the subscales which were formed by the experts in the current study. The internal reliability analysis was conducted for the four subscales of the Turkish version of CTS-S by considering the composite score, obtained by

multiplication of the frequency of occurrence and the appraisal (i. e., CTS-S Negative, and CTS-S Positive).

The Turkish version of the CTS-S Negative was found to have Cronbach's alpha coefficient .75 for males, .74 for females, and .74 for the whole sample, which were statistically acceptable. However, the CTS-S Positive was found to have a Cronbach's alpha coefficient .60 for male sample, .35 for female sample, and .58 for the whole sample (see Table 12). Since the table of Cronbach's alpha if any of the items were deleted did not indicate significant differences, all the items in the scale were retained.

Table 12. *Reliability Coefficients of the CTS-S Negative and CTS-S Positive*

| | Cronbach's Alpha (α) | |
|---|---|---|
| | Negative | Positive |
| CTS-S | .74 | .58 |
| Male | .75 | .60 |
| Female | .74 | .35 |

*Note.* CTS-S = Cumulative Trauma Scale-Short Form

Moreover, the reliability analyses were conducted for the categories, which were determined by the raters in the trauma field, both for CTS-S Negative and CTS-S Positive. The analysis revealed that Cronbach's α for Survival Trauma Subscale was .47, for Personal Identity Trauma Subscale was .59, for Collective Identity Trauma Subscale was .63, and for Family-Attachment Trauma Subscale was .40 in the CTS-S Negative. In the CTS-S Positive, reliability analysis indicated that Cronbach's α for Survival Trauma Subscale was .57, for Personal Identity Trauma Subscale was .24, for Collective Identity Trauma Subscale was .05, and for Family-Attachment Trauma Subscale was .20 (see Table 13). The results showed that the

four subscales of the CTS-S were not reliable statistically since the reliability coefficients of the subscales were found to be less than .70.

Table 13. *Reliability Coefficients of the CTS-S Subscales*

| | Cronbach's Alpha (α) | |
|---|---|---|
| | Negative | Positive |
| Survival Trauma Subscale | .47 | .57 |
| Personal Identity Trauma Subscale | .59 | .24 |
| Collective Identity Trauma Subscale | .63 | .05 |
| Family-Attachment Trauma Subscale | .40 | .20 |

### 3.2.4. Concurrent Validity of the CTS-S

To examine the concurrent validity of the Turkish version of the CTS-S, at first, Pearson Coefficient between the composite scores of the CTS-S and the Impact of Event Scale-Revised and its subscales were calculated. As expected, there was significant positive correlation between the total score of the CTS-S Negative and the Impact of Event Scale-Revised ($r = .22$, $p < .001$). Also, the relationships were found to be significant between CTS-S Negative and intrusion subscale ($r = .26$, $p < .001$), CTS-S Negative and hyperarousal subscale ($r = .24$, $p < .001$); however, the relationship between CTS-S Negative and avoidance subscale was not found to be significant ($r = .09$, $p = .10$). In addition, there was no significant relationship between the CTS-S Positive and the Impact of Event Scale-Revised and its subscales (see Table 14).

Secondly, the correlations between the Turkish version of the CTS-S and the Posttraumatic Growth Inventory and its subscales were computed for concurrent validity. Pearson Coefficient was computed in order to examine relationship between

the total score of the CTS-S Negative and the total score of PTGI. It was an expected result that CTS-S Negative score was found to be significantly correlated with the posttraumatic growth score ($r$ = .24, $p$ < .001). Similarly, the relationships of the three subscales of the PTGI were found to be significantly correlated with the CTS-S Negative. Relationship with others subscale ($r$ = .15, $p$ < .01), philosophy of life subscale ($r$ = .21, $p$ < .001), and self-perception subscale ($r$ = .26, $p$ < .001) had positive correlations with the total score of the CTS-S Negative. However, the correlation analysis revealed no association between the CTS-S Positive and Posttraumatic Growth Inventory and its subscales. Table 14 shows correlation coefficients among the CTS-S and other instruments for concurrent validity purposes.

### 3.2.5. Discriminant Validity of the CTS-S

Correlation analysis between the composite scores of CTS-S and the Social Adaptation Self-Evaluation Scale was conducted to examine the discriminant validity of the Turkish version of the CTS-S. The analysis revealed that the relationship between the scores of CTS-S Negative and social adaptation ($r$ = -.02, $p$ = .72), and CTS-S Positive and social adaptation score ($r$ = -.07, $p$ = .17) were not significant. The result implied the expected finding that the Turkish version of the CTS-S, which intends to measure the trauma appraisal, is theoretically different from the Social Adaptation Self-Evaluation Scale, which measures social functioning in the daily life.

For discriminant validity, the Pearson Coefficient was calculated for checking the relationship between the Turkish version of the CTS-S and the General Self-Efficacy Scale. As expected, it was found that CTS-S Negative ($r$ = .02, $p$ = .67) and CTS-S Positive ($r$ = .05, $p$ = .30) scores were not significantly correlated with the self-efficacy score. As expected, the result indicated that the Turkish version of the CTS-S is conceptually different from the General Self-Efficacy Scale, which evaluates optimistic self-beliefs in the face of life difficulties. Table 15 shows correlation coefficients among the CTS-S and other instruments for discriminant validity purposes.

Table 14. *Correlation Matrix between Concurrent Validity Scales*

| Scales | CTS-S N | CTS-S P | IES-R | IES-R-I | IES-R-A | IES-R-H | PTGI | PTGI-O | PTGI-L | PTGI-S |
|---|---|---|---|---|---|---|---|---|---|---|
| CTS-S Negative | - | | | | | | | | | |
| CTS-S Positive | .16* | - | | | | | | | | |
| IES-R | .22** | .03 | - | | | | | | | |
| Intrusion | .26** | .06 | .94** | - | | | | | | |
| Avoidance | .09 | -.02 | .83** | .63** | - | | | | | |
| Hyperarousal | .24** | .04 | .92** | .90** | .61** | - | | | | |
| PTGI | .24** | .06 | .35** | .34** | .29** | .31** | - | | | |
| Relationship with others | .15* | .02 | .22** | .22** | .16** | .19** | .85** | - | | |
| Philosophy in life | .21** | .05 | .36** | .34** | .31** | .32** | .89** | .62** | - | |
| Self-perception | .26** | .08 | .35** | .34** | .30** | .29** | .96** | .76** | .80** | - |

*Note 1.* CTS-S Negative = Frequency x Negative Appraisal; CTS-S Positive = Frequency x Positive Appraisal; IES-R-I = Intrusion subscale of IES-R; IES-R-A = Avoidance subscale of IES-R; IES-R-H = Hyperarousal subscale of IES-R; PTGI-O = Relationship with others subscale of PTGI; PTGI-L = Philosophy in life subscale of PTGI; PTGI-S = Self-perception subscale of PTGI

*Note 2.* * indicates $p < .01$; ** indicates $p < .001$.

*Note 3.* The results are obtained after the effects of gender and marital status were controlled statistically.

Table 15. *Correlation Matrix between Discriminant Validity Scales*

| Scales | CTS-S Negative | CTS-S Positive | SASS | GSE |
|---|---|---|---|---|
| CTS-S Negative | - | | | |
| CTS-S Positive | 16* | - | | |
| SASS | -.02 | -.07 | - | |
| GSE | .02 | .05 | .41** | - |

*Note 1.* CTS-S Negative = Frequency x Negative Appraisal; CTS-S Positive = Frequency x Positive Appraisal; SASS = Social Adaptation Self-Evaluation Scale; GSE = General Self-Efficacy Scale.
*Note 2.* * indicates $p < .05$; ** indicates $p < .001$.
*Note 3.* The results are obtained after the effects of gender and marital status were controlled statistically.

# CHAPTER 4

# DISCUSSION

The purpose of this study was to translate the Cumulative Trauma Scale-Short Form (CTS-S) into Turkish and to test the psychometric properties, namely the validity and the reliability of the Turkish version of the CTS-S. The current study can be considered to have a clinical importance since currently there is no trauma instrument in the Turkish literature which includes a variety of traumatic life events that can be experienced throughout a person's life by considering the frequency of occurrence of the event, the individual's age at the first time of the traumatic event, and how the person appraises effects of the traumatic event in terms of both the negative and the positive impacts.

Within the scope of the aims of the study, psychometric properties of the CTS-S were investigated. Primarily, the interrater reliability and internal reliability analysis were conducted for reliability purpose. Also, correlation analyses were run for examining concurrent and discriminant validity of the CTS-S with other measures. In the general sense, not for the subscales formed by the raters, but as a whole scale, the adapted version of the CTS-S was found to be a reliable and valid scale. Results obtained from the raters' agreement indicated that a four-factor structure can be suitable for the adapted version of the CTS-S. Specifically, the four subscales were the Survival Trauma Subscale, the Personal Identity Trauma Subscale, the Collective Identity Trauma Subscale and the Family-Attachment Trauma Subscale.

Also, Cronbach's alpha which was calculated for the internal reliability of the whole scale was found to be in the acceptable range, whereas the subscales were not reliable in statistical terms. Furthermore, the hypotheses about the concurrent and discriminant validity were confirmed. Results showed that the CTS-S was correlated with the Impact of Event Scale-Revised (IES-R) and the Posttraumatic Growth Inventory (PTGI), which are the indications of the concurrent validity. Also, the

appraisal score of the CTS-S was found to be not correlated with the scores of the General Self-Efficacy Scale (GSE) and the Social Adaptation Self-Evaluation Scale (SASS), which are the supports for the discriminant validity.

In this section, preliminary results about the demographics, specifically on gender, and the results of the validity and reliability analyses in regards to the research hypotheses and the previous literature findings will be discussed. Subsequently, the clinical implications related to the research, and strengths and limitations of the study will be discussed. Finally, the suggestions for future research will be presented.

### 4.1. Traumatic Event and Its Relation to Gender

The life-time prevalence of traumatic events is one of the major concerns of the trauma literature since the modern world highlights the importance of psychological well-being and fully functioning individuals. Experiencing at least one traumatic event throughout life was reported to range from 28 to 90% (Benjet et al., 2016). Previous research in Turkey revealed that the mean number of traumatic events which individuals face during their lifetime varies from 2.22 to 2.69 (Karanci et al., 2012). However, the current study findings illustrated that the average number experiencing a potentially stressful and traumatic event was 6.64 in the study sample. In the worldwide, the mean number of lifetime traumatic event exposure was changing between 2.6 to 5.1 (Benjet et al., 2016; de Vries & Olff, 2009; Gill, Page, Sharps, & Campbell, 2008). The discrepancy between the literature and the recent study findings probably are related to the methodological difference, specifically the scale variation. Since the number of items in the adapted version of the CTS-S is higher than the scales which have already been used in the trauma literature and these items are corresponding to the variety of the traumatic events, the mean number of lifetime incidence of experienced events was found to be higher.

There are many studies that have been conducted throughout the world to examine whether pre-trauma characteristics are related with experiencing certain types of traumatic events and being exposed to more traumas. The gender of the individual facing the trauma is one of the pre-trauma characteristics, that has been

widely reported to be related to the type and frequency of experiencing traumatic events in the related research, and is one of the main focus of the current study. Some research papers reported that females experience more traumas and show more adverse impacts after these experiences as compared to males (Axinn, Ghimire, Williams, & Scott, 2013; Kilpatrick et al., 2013). The rationale behind this finding was explained by the researchers that some cultures devalued women, which make them open to stressful and traumatic events, and the expression of the trauma symptoms may be more overt in the female populations. However, a meta-analytic study which was conducted by Tolin and Foa (2016) implied that men are exposed to more traumatic events than women even though women were diagnosed with PTSD more commonly. Consistent with the findings in relation to gender, the results of recent study showed that men in the sample reported more trauma experience than women in the sample. The related literature also contains more studies with similar findings (Amstadter, Aggen, Knudsen, Reichborn-Kjennerud, & Kendler, 2012; Ghazali, Elklit, Balang, Sultan, & Kana, 2014). Although the present results indicated that there is slight difference in experiencing trauma between males and females, statistically significant difference was not found between two genders. This finding is also consistent with the related literature showing that men and women do not differ from each other in terms of experiencing traumatic events (Komarovskaya, Loper, Warren, & Jackson, 2011; Salazar, Keller, Gowen, & Courtney, 2012). The reason behind the conflicting results can be explained by the culture because some cultures make people vulnerable to certain types of traumas and this can vary depending on gender, age and ethnic factors. Consequently, although a gender difference was not observed in the number of experiencing traumatic events, gender is considered to be an important factor when investigating the type of traumas experienced.

The types of traumatic events which are experienced by the general population and subpopulations are another interest of the literature. The result of the present study demonstrated that sudden death of a close friend, or family member, natural disaster and nervous breakdown due to daily hassles are the traumatic events which are reported to be *experienced most* by the study sample. This finding is

similar with the Turkish literature showing that unexpected death of a loved one, natural disasters, accidents and life-threatening illness are the trauma types most likely reported in Turkey (Arikan, & Karanci, 2012; Gül, 2014; Karancı et al., 2012). Thus, it is an indication that the adapted version of CTS-S is a useful tool to capture similar events which are experienced by the population. In addition to the similar events with the literature, individuals in the current sample reported living in poor conditions, school and relationship failures as traumatic experiences. The adapted version of CTS-S is also deemed important since it presents a large variety of potentially traumatic events as compared to other sclaes.

In addition to the occurrence of various potentially traumatic events, the present study also yielded findings on which traumas are *most frequently experienced* by the research sample. The results showing which traumatic events are experienced more often shows similarity with the findings of which events were most commonly reported. That is, most frequently experienced traumatic life events were the sudden death of a close one, natural disaster and nervous breakdown due to daily hassles, respectively. Sexual abuse traumas were reported least likely and frequently. The literature emphasized that reporting sexual traumas may be suppressed because people who experienced sexual traumas are afraid of negative judgments from their families as well as professionals (Ahrens, 2006). Also, Abbey, Parkhill and Koss (2005) pointed out that the phrasing of items in self-report instruments can have an impact on the decision of the sexual assault victims in reporting the event. Thus, the reason behind the less reporting of traumas like sexual abuse from a stranger and from a family member can be a bias of self-report measurement or can be the characteristics of the study sample which will be widely discussed under the title of *Strengths and Limitations of the Study.*

As a part of trauma prevalence research, gender differences in experiencing different types of traumatic events has been the center of attention due to the need to develop gender-based interventions in the societal and clinical level. According to the results of the current study, there were slight differences in the types of traumatic events reported by men and women. Specifically, men reported sudden death of a close one, natural disasters and accidents whereas women reported natural disasters,

sudden death of a close one and nervous breakdown due to daily hassles as events which they experienced most. This finding is also consistent with the research papers in the related literature (Ditlevsen & Elklit, 2012; Karanci et al., 2012; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Despite other events, the nervous breakdown due to daily hassles is an item which was not included in the trauma scales before, and it is one of the most reported traumatic experiences in women. Daily hassles were considered as related to the other medical conditions such as depression, anxiety, and PTSD in the literature (Cooper, Guthrie, Brown, & Metzger, 2011; Heron, Bryan, Dougherty, & Chapman, 2013) and were seen in women more commonly (Asselmann, Wittchen, Beesdo-Baum, & Lieb, 2017). Daily hassles evoke the nervous system, and the cumulative impact of daily stresses can be observed as traumatic reactions like a nervous breakdown. In addition, social life is more demanding especially for women since the cultural norms and modern world emphasized that women must be successful in diverse areas such as occupation, households, and social relationships. Hence, this item may be found as one of the most experienced events in the sample due to its comorbidity with the other medical problems or cultural norms and practices which is a burden on women.

Although traumas reported by males and females differ in terms of rate of occurrence, the current research findings indicated that only some types of traumatic events experienced by males and females differ significantly. Events which involve threats to the physical integrity of an individual such as accidents, physical assaults by someone older, harming someone and living in a violent community are experienced more by males than by females. A meta-analytic review paper prepared by Tolin and Foa (2016) supports this finding, showing that men are more prone to traumas such as accidents, nonsexual assaults, physical traumas like war and combats, and unspecified injuries than females. In the Turkish culture, the majority of people involved in the work life are men and they are recruited for the jobs physically demanding. The accidents which were reported by males are thought to be occupational-work accidents generally. However, injuries and deaths related to car accidents can also be more likely to be experienced by males since the driver population contains more male drivers and safety behaviors are more likely to be

ignored by the male drivers (De Smet, 2008; Porter, 2011). Moreover, rather than verbal assaults, men tend to show their negative feelings (especially anger) through physical acts (Booman, 2003). Therefore, taking part in events involving physical attacks is considered compatible with the results of the present study.

Based on the results on gender differences, females reported much more experience of events like discrimination due to gender by the society or institutions and discrimination due to gender by family members. As a basis, gender norms and gender roles are initially learned within the family and continue to be practiced in the society. The roles assigned to the gender can define the way of behaving, thinking, and even feeling which in turn creates gender inequalities and discrimination. In most of the cultures including the Turkish culture, for instance, women are mostly defined through household chores and associated with motherhood as a "job" in the family (Beaujot, Liu, & Ravanera, 2017). When it comes to taking part in the business life or maintaining employment status, women are considered as inadequate due to their motherhood (Ozgoren, Ergocmen, & Tansel, 2018). It is also shown in the literature that women are discriminated against especially in their working environments which in turn affects their performances and health (Pavalko, Mossakowski, & Hamilton, 2003). Discrimination by society and institutions due to gender differences are shown in both overt and covert ways. Indeed, women are less preferred in recruitment processes, exposed to less positive attitude by their co-workers, and they have problems when getting promotion (Fernandez & Campero, 2017; Tiwari, Awasthi, & Mathur, 2018). The studies conducted in Turkish samples have revealed similar findings with the literature and the current study (Fullagar, Slick, Sumer, & Sverke, 2003; Kılıç & Kuzey, 2016; Sakalli-Ugurlu & Beydogan, 2002).

Finally, preliminary findings revealed that there are gender differences in the score of CTS-S Positive. Although these findings may not reflect the true nature of the general population, it is also consistent with the existing literature. According to one of the hypotheses of the current study, appraisals of the traumatic experiences were expected to be differentiated between genders for the score of negative evaluation. In the findings of the study, while there was no difference between males

and females in terms of negative evaluation, there was a significant difference between genders in terms of positive appraisal scores. That is, men scored higher in CTS-S Positive as compared to women in the sample, showing that men report more positive effects due to experiencing the traumatic events as compared to women. A possible explanation behind this outcome can be that men may be ignoring or denying the negative experiences associated with the traumas. This explanation can also be supported by the literature by studies that show that women are more likely to be diagnosed with PTSD since they express more negativity and search for treatment related to their traumatic experiences (Parker-Guilbert, Leifker, Sippel, & Marshall, 2014; Lehavot, Katon, Chen, Fortney, & Simpson, 2018). Another explanation of the difference in the score of CTS-S Positive can be that the types of traumas experienced by women and men are different and that they may be coping with these traumatic events by using different strategies (Hourani, Williams, Bray, & Kandel, 2015; Villamor, & de Adana, 2015).

### 4.2. Psychometric Properties of the CTS-S

In the original study, Kira and his colleagues (2008) conducted a factor analysis for the scale and found six subscales, and later, additional subscales were also formed. In the current study, factor analysis was not presented in detail since similar scales in the trauma literature does not support using factor analysis due to the fact that conceptually experiencing one type of event may not necessarily bring about experiencing other specific events, even if these traumas are contextually similar (Carr, Hardy, & Fornells-Ambrojo, 2018; Hooper, Stockton, Krupnick, & Green, 2011). However, to stick with the original paper, in the current study, exploratory factor analysis was also conducted. The KMO measure of sampling adequacy was found to be slightly above the accepted value; yet, it was not enough ideally (Field, 2000; Pett, Lackey, & Sullivan, 2003). So, the KMO value was the first indicator showing that the scale can be problematic for obtaining a factor structure. Then, the analysis revealed a 5-factor solution by examining eigenvalues and the scatter plot. Although four subscales' items grouped almost perfectly in accordance with the Developmentally-Based Trauma Framework and trauma

taxonomy, the last subscale contained dissimilar items in its content. Thus, because of the recommendations of the literature for similar trauma instruments and inconclusive result of the preliminary analysis, exploratory and confirmatory factor analyses were not included in the current research.

As stated earlier, based on the preliminary findings of the factor analysis, some items were meaningfully grouped under a factor in terms of the content which is also parallel with the original study. Namely, subscales of *survival trauma, personal identity trauma, collective identity trauma and family-attachment trauma* were clearly seen in the factor analysis. To be able to indicate the factor structure, five subscales were defined and present to experts in trauma psychology. They were asked to place the items of the scale in these defined scales and interrater reliability analysis was conducted.

The raters generally agreed on placing the items in the related categories and almost half of the items in the scale remained in categories specified by the original study. There are also some items which were not placed in their original place by the raters due to the fact that the subscales were not completely identical with the original study and cultural connotations of these items may have been different. For instance, item 11 (*witnessed own family violence*) were considered as a secondary trauma in the original study. Yet, since there was no secondary trauma subscale in the current study and it was an item related with the family relations, item 11 placed under the Family-Attachment Trauma Subscale. Moreover, a rater evaluated item 20 (*experienced nervous breakdown due to hassles*) and item 30 (*remarried*) as non-traumatic experiences and did not place these items under a category. In the original study, Kira and his colleagues (2008) also indicated these two items as uncategorized. However, the other three rater's agreement was considered for these items and two of them were placed in Personal Identity Trauma Subscale.

For some items in the CTS-S, there was inconsistency between the raters. In this case, the researcher of the current study decided the subscale of the item by considering the opinions of the raters and the findings in the original study conducted by Kira and his colleagues (2008). However, even when there is an agreement between the experts, they admitted that they have difficulty when placing the items

into a single category. Indeed, for most of the items, they expressed their second idea about the suitable category. For instance, item 13 (*sexual abuse or rape*) and item 33 (*harming someone*) are evaluated to belong to both the Survival Trauma (Man-made Cause) Subscale and Personal Identity Trauma Subscale. This is an expected result since Kira (2001) suggested in his proposal of the trauma taxonomy that traumatic events are not mutually exclusive and may be conceptually and experientially intertwined.

Despite drawbacks of factor analysis and non-distinct categories, the subscales were formed by interrater reliability analysis and moderate agreement between raters was observed. As a result of this analysis, the Survival Trauma (Natural Cause) Subscale has two items, the Survival Trauma (Man-made Cause) Subscale includes eight items, and the Personal Identity Trauma Subscale contains twelve items. The Collective Identity Trauma Subscale has six items and the Family-Attachment Trauma Subscale includes seven items. Since the Survival Trauma (Natural Cause) Subscale contains only two items and this is under the below recommended number per subscale in the literature (Cook, Hepworth, Wail, & Warr, 1981; Harvey, Billings, & Nilan, 1985), the Survival Trauma (Natural Cause) Subscale and the Survival Trauma (Man-made Cause) Subscale were combined and finally a four-factor structure was accepted. Although these two categories are conceptually similar, studies in the literature showed that human-made traumas cause more traumatic symptoms as compared to natural disasters (Bromet et al., 2017; Riaz et al., 2015). Thus, these subscales can be split again with the help of new items in the future studies. For instance, item 1 (*natural disaster experience*) can be separated into several items by considering the type of natural disasters (e.g. earthquake, flood, storms, etc.).

In the findings, the mean appraisal scores of the subscales, which were created by the raters, were also presented. On average, the items which were mostly evaluated negatively were found to be within the category of Family-Attachment Trauma, and in terms of positive appraisal, the lowest mean score was indicated for the items of the same category. This result shows that the traumas originating from familial relationships have more negative impacts on the study sample. Family is an

important concept in Turkish society; indeed, the Turkish culture was defined as "culture of relatedness" (Kağıtçıbaşı, 1985). Although in last couple of years, there is a transition from collectivism to individualism, the importance of staying connected with family members in Turkish culture is emphasized even with the traditions and customs. Visiting the family and providing emotional and economic support to family members are considered among the responsibilities of the individual. That is, it is expected to exist in the family before the individual actualizes the self (Imamoğlu & Karakitapoğlu-Aygün, 2004). For this reason, the traumas experienced by the individuals within the family or with family members (e.g., losing someone in the family, being abandoned or being exposed to violence) can be crucial in the process of individuation. Considering these types of events as more negative experiences, it can be mentioned that family-attachment traumas may have more destructive impacts because people are emotionally tied with their family members, and perhaps because they strongly identify with them to some extent.

Internal reliability analysis of the Turkish version of CTS-S was also conducted for examining the reliability and the partially expected result was obtained. Although the Cronbach's alpha is not an evaluated statistic for similar trauma instruments in the literature (Carr, Hardy, & Fornells-Ambrojo, 2018; Higgs, 2017; Wilker et al., 2015), alpha coefficients were calculated in the present study to remain parallel to the original study. As a result of the analysis, the adapted version of the CTS-S was found to be a reliable instrument by using the score of CTS-S Negative for the whole sample, and for female and male samples separately of the current study. The Cronbach's alpha coefficients were slightly smaller than the alphas in the original study (Kira et al., 2008). However, when using CTS-S Positive, the reliability of the scale was not supported. Even though the Cronbach's alpha is poor for the whole sample and male sample, the alpha value is in unacceptable range for the female sample since it is smaller than 0.5. Because the impacts of the traumatic events in the scale are often evaluated negatively by the individuals, it is also predictable that there is no consistency in terms of positive appraisal. Hence, the adapted version of the CTS-S is reliable measure when capturing the negative impact of the presented traumatic events.

Furthermore, the internal reliability was checked for the four subscales based on interrater agreement. However, the findings indicated that although the alpha values of some of the subscales were in the questionable range (i.e. Personal Identity Trauma Subscale and Collective Identity Trauma Subscale), other subscales are not statically reliable. A possible reason behind this finding is similar with the reason of non-meaningful results obtained in the factor analysis. Since the occurrence of specific traumatic events do not necessarily entail experiencing other events of similar nature, the occurrence of one trauma does not indicate that the other events in the same category are experienced. To give an example, experiencing a natural disaster and having a life-threatening illness are independent of each other even though both events are threatening the survival of the individual. Thus, only a small portion of events, like parental divorce and been abandoned by father can be experienced together.

Based on the findings of the reliability analyses, it is thought that it would be more advantageous to use a *single-factor structure* and *CTS-S Negative* rather than the four-factor structure and CTS-S Positive of the adapted scale. However, to be able to decide precisely, further studies with larger samples needs to be conducted.

Lastly, analyses conducted to investigate the validity of the adapted version of the CTS-S revealed expected results. That is, the score of the CTS-S Negative was found to be significantly correlated with the concurrent validity measures, which are the Impact of Event Scale-Revised, the Posttraumatic Growth Inventory and subscales of these instruments whereas the score of CTS-S Positive was not associated with these scales. According to the findings, the only correlation that did not appear significant was the correlation of CTS-S Negative with the avoidance subscale of IES-R. There can be several reasons of this finding. Firstly, negative and stressful events are encouraged to be spoken out with other people in the community. That is, since sharing the traumatic experiences is a common practice in the Turkish culture, avoidance from the emotions and reminders of these events cannot be easily displayed for the sample of the current study. Indeed, when discussing about the event, people can get emotional support from their surroundings, they can realize that these events did not happen just to them and their feelings are accepted and

normalized, which can be helpful in the recovery process (Hobfoll et al., 2007; Stige, Rosenvinge, & Træen, 2013). Thus, avoidance may not be fully experienced after specific types of traumas in Turkish culture and not associated with the negative appraisal of the events. Secondly, some items in the adapted scale describe stressful situations that are frequently encountered in daily life (e.g. discrimination, relational problems, loss, accident and illness). For the Turkish sample, these events may be considered as events that are frequently encountered and difficult to avoid both in terms of direct exposure and also through witnessing. Lastly, in Turkish culture, acceptance of the traumatic events rather than avoidance is more likely to be seen due to religious beliefs. Pargament (2001) pointed out that religiosity functions as a coping skill and studies in the literature supported that religious beliefs help people after trauma to accept and to process the experience (Eryücel, 2013; Tausch et al., 2011). Therefore, the negative events may be considered as the action of God by the sample of the current study and it may lead to non-significant association between avoidance and negative appraisal.

Although the correlation analysis for concurrent validity revealed statistically significant results as proposed in the hypothesis, the Pearson's *r* values did not indicate strong associations. In the literature, small but significant sorrelations were observed for the relationship between cumulative trauma scores and other concepts (Gillespie & Gates, 2013; Millender & Lowe, 2017; Nael, 2012). Yet, this may be related to the restriction of range, sample selection and large sample size. Goodwin and Leech (2006) discussed that less variability among data can be the reason of smaller *r*. More specifically, the range restriction can be an explanation of small correlations due to less variance. The participants in the current study did not differ so much in terms of experiencing traumatic events. This can also be related with the sampling. Snowballing technique was used as sample selection for the present study and the characteristics of the participants may have been similar to each other, which in turn might have led to less variance in the data. Moreover, Schober and Schwarte (2018) suggested that with a large sample size, a small but significant correlation can be captured. In the present study, relatively large number of participants was recruited by considering the recommendations of the literature in adaptation studies;

yet, this may have become the reason of significant but small correlations obtained in the current study.

The findings obtained from the correlation analyses also showed that the scores of the CTS-S Negative and the CTS-S Positive were not associated with the scores of the discriminant validity measurements, which were the Social Adaptation Self-Evaluation Scale and the General Self-Efficacy Scale. Based on the hypotheses of the current study and the outcomes of the original study, these are expected findings which infer that the adapted version of the CTS-S measures a different concept than SASS and GSE.

### 4.3. Clinical Implications

The results of the current study have substantial implications for clinical practices. The adapted version of the CTS-S is presented as a new valid and reliable assessment tool for the area of trauma research and clinical practice. That is, with the help of the CTS-S, stressful and traumatic experiences occurring throughout life can be investigated at one time by considering the occurrence of the traumatic event *types*, *frequency* of experiencing traumatic events, the *age* of the person at the time of the trauma exposures and both negative and positive impact *appraisal* of the events. Firstly, in terms of the trauma type, the CTS-S includes a wide range of diverse traumatic experiences which is much richer than the existing scales in the trauma literature. Since the Developmentally-Based Trauma Framework suggested the importance of the integration of three valid trauma paradigms (Kira, 2012), the items of the traumatic experiences are not limited to the events that only are damaging to physical integrity such as accidents, physical assault and sexual abuse; but also, the events related to harming the self (e.g. gender discrimination, relationship and school failures, etc.) are taken into consideration which increase the variety of the trauma types.

Secondly, the CTS-S can provide information about the frequency of the stressful events. The frequency measure reflects whether an event has been experienced repeatedly or not. The frequency of a traumatic event, which reflects its continuity in the persons' life, can be an important determinant when investigating

the effects of the traumas. For instance, the impact on the autobiographical memory for more frequently experienced traumas can be studied. Furthermore, the person's coping capacity with one time versus continuous events can also be examined.

Thirdly, investigating the age of the traumatic experience can give a new point of view to the researchers since it can help to create a map of an individual's trauma history developmentally. Diversity in traumas which targeted the different stages of the life like birth, childhood, adolescence and adulthood provides this opportunity for both research and practice.

Lastly, the presence of the appraisal subscale of the CTS-S allows measuring the extent to which a person is affected from each traumatic events as well as the collective evaluation of traumatic experiences. This can be advantageous in the trauma studies examining traumas that have more negative or positive impact for the individuals' life. Furthermore, the impact of treatment programs on the changes in the positive and negative appraisals of lived traumas can enable to assess the effectiveness of different intervention strategies.

All in all, this study introduced the adapted version of the CTS-S which is a new measurement for the Turkish trauma literature, and it can be a useful tool for measuring trauma experiences of the people in trauma studies and investigating trauma histories in clinical practice with its four aspects. Also, it can help to widen the scope of the trauma literature in the Turkish culture by allowing the evaluation of the cultural suitability of the Developmentally-Based Trauma Framework and trauma taxonomy.

### 4.4. Strengths and Limitations of the Study

In the current study, there are several strengths which must be mentioned. The main strength of this research is the sample size. That is, this study was conducted with 384 participants, which is larger than what is recommended for adaptation studies in the literature. Also, the gender ratio was almost equal in the present study, which increased the power of comparison between genders in the present study, although the number of female gender is larger than male participants.

Other strength of the present research is the heterogeneity of the study sample. The sample was composed of individuals from different cities, income and marital status, and age and occupational groups. This can increase the probability of the representativeness of the community sample in terms of the trauma experience.

Besides the strengths of the study, there are some limitations of the current research. First of all, this study did not include test-retest procedure as part of the reliability testing of the CTS-S. The consistency of the adapted version of the CTS-S may be supported by conducting a test-retest study. However, because of the anonymity of the participants and the time limitation, test-retest method was not carried out.

Secondly, the present study did not specifically sought out for individuals who are exposed to multiple traumatic events even though almost all of them had more than one trauma experience. This can be the bias of the sampling method which is snowball sampling. Similarly, the sampling method may lead to the range restriction problem since extreme scores were not observed. As mentioned earlier, this can be one of the explanations of the significant but not strong correlations in the results. Thus, the study can be replicated with a representative community sample.

Lastly, although the study sample was not composed of only university student, most of the participants in the sample were university graduates. Since trauma studies which are focused on the impact of the trauma experience indicated that the education level can be an important pre-disaster factor when predicting the trauma outcome, this characteristic of the sample may have influenced the results.

**4.5. Suggestions for Future Research**

Considering the findings of the present study, some suggestions for further research can be proposed. First of all, although the sample of the current research was larger than the recommended size in the literature, future studies using larger samples can be conducted in order to increase the representativeness of the findings.

Although the current study was conducted with a sample which is diverse in terms of income, marital status, age and occupational groups, still the findings of the current research should be considered with caution. Thus, future studies should target

to replicate the findings of the current research with a wider sample representing all segments of the general population. Recruiting individuals with different types of traumatic experiences when replicating the study may be helpful to achieve more meaningful results. Also, investigating the psychometric properties of the adapted version of the CTS-S in minority groups (ethnic, gender and religious minorities) may yield valuable results.

Due to missing values, the present study could not analyze the age dimension of the adapted version of the CTS-S. In future research, the age subscale of the instrument needs to be used to expand the scope of the trauma area and the usage of the CTS-S. For instance, which traumas are more frequently experienced in specific age groups can be examined. Similarly, early traumatic experiences will be identified for individual-level or specific cohort to explore their effects in later life. Also, for the negative and positive appraisal of the events, whether there is any difference between previously or recently experienced life events can be an important research question.

Another suggestion for further research can be conducting test-retest for investigating the reliability of the adapted version of the CTS-S. Although test-retest reliability is a recommended way to examine reliability of similar trauma instruments, the current research did not include it due to the time limitation and the anonymity of the participants. Thus, future studies are needed to support the reliability of the Turkish version of the CTS-S by checking the test-retest reliability coefficient.

In the present study, predictive validity of the instrument was not investigated. Further research must assess the predictive ability of the adapted version of the CTS-S since predictive validity is also an important part of psychometric studies. In addition, in the field of trauma, the prediction of other concepts by the earlier traumatic experiences (in terms of type and frequency of the event, and age of exposure) will be critical for the use of the adapted scale.

The last suggestion is to improve the scope of the instrument. In the present study, the original version of the scale with its content and dimensions was preserved in the process of adaptation in order to make it comparable to the original scale.

However, in future studies, some items can be added to cover some traumatic experiences which were not mentioned in the original instrument. For instance, items covering school bullying, economic crises, providing caregiving to a family member due to an illness, or losing a pet can be added to expand the scope of traumatic experiences measuring by the Turkish version of the CTS-S.

### 4.6. Conclusion

In conclusion, in the current study, the Cumulative Trauma Scale – Short Form was translated into and its psychometric properties were examined. Based on the findings, the adapted version of the CTS-S was found to be a valid and reliable measurement for trauma research.

In addition, type of traumatic event, frequency of exposure, and appraisal of experience in the Turkish sample were carried out within the scope of the present study. The differences between the genders in these domains were also emphasized. By comparing to the related literature and the original study of the scale, similar demographic and psychometric findings indicated in the current study which highlights the usability of the adapted version of the CTS-S.

With the help of this study, a cumulative trauma measurement which has four different dimensions and covering more diverse traumatic experiences has been brought into potential use by Turkish researchers. As a result of this study, it is thought that trauma studies will be enriched by considering trauma histories of people rather than just focusing on recent or more disturbing trauma experience in the Turkish trauma literature.

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# APPENDICES

## APPENDIX A. INFORMED CONSENT FORM

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

**Çalışmanın Amacı Nedir?**

Araştırmanın amacı, travma çalışmalarında kullanılmak üzere var olan bir ölçüm aracını Türk toplumuna uyarlamaktır. Çalışmaya katılmak için, 18 yaşından büyük olmak ve hayatınız boyunca en az bir stresli yaşam olayından geçmiş olmanız gerekmektedir.

**Bize Nasıl Yardımcı Olmanızı İsteyeceğiz?**

Araştırmaya katılmayı kabul ederseniz, sizden yaklaşık 20 dakika sürecek online ankete katılmanız beklenmektedir. Bu ankette sizlere bir dizi çoktan seçmeli soru yöneltilecek ve bu sorulara derecelendirme ölçeği üzerinde yanıtlamanız istenecektir. Anketi tek oturumda tamamlamanız, araştırmanın güvenilir ve geçerli olması bakımından önem taşımaktadır.

**Sizden Topladığımız Bilgileri Nasıl Kullanacağız?**

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

**Katılımınızla ilgili bilmeniz gerekenler:**

Anket, genel olarak kişisel rahatsızlık verecek sorular veya uygulamalar içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir nedenden ötürü kendinizi rahatsız hissederseniz anketi yarıda bırakıp çıkmakta serbestsiniz. Böyle bir durumda doldurduğunuz anket çalışmaya dahil edilmeyecektir.

**Araştırmayla ilgili daha fazla bilgi almak isterseniz:**

Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Çalışma hakkında daha fazla bilgi almak için Psikoloji Bölümü öğretim üyelerinden Prof. Dr. A. Nuray Karancı (E-posta: karanci@metu.edu.tr) ya da yüksek lisans öğrencisi Selen Eltan (E-posta: eltan.selen@metu.edu.tr) ile iletişim kurabilirsiniz.

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

## APPENDIX B. SOCIODEMOGRAPHIC INFORMATION FORM

- **Yaşınız:**

- **Cinsiyetiniz:**

- **Bulunduğunuz il:**

- **Eğitim durumunuz (Son aldığınız diploma ya göre):**

☐ İlkokul ☐ Ortaokul ☐ Lise

☐ Yüksekokul ☐ Üniversite ☐ Lisansüstü

- **Medeni durumunuz:**

☐ Bekâr ☐ Evli ☐ Boşanmış ☐ Dul

- **Çalışıyor musunuz?**

☐ Çalışıyorum

☐ Şu anda çalışmıyorum

☐ Emekliyim

☐ Hiç çalışmadım (ev hanımı vs.)

- **Mesleğiniz:** ___________________

- **Gelir düzeyiniz:**

☐Çok düşük ☐Düşük ☐Orta ☐Orta Üstü ☐Yüksek

## APPENDIX C. THE CUMULATIVE TRAUMA SCALE – SHORT FORM

## KÜMÜLATİF TRAVMA ÖLÇEĞİ – KISA FORMU

**Yönerge:** Birçok kişi hayatında farklı olaylar ve durumlar yaşamıştır. Aşağıdaki sorularda size belirli olaylarla ilgili sorular sorulmaktadır. Lütfen her olay için, eğer sizin yaşamınızda olduysa kaç kere olduğunu ve size olumlu veya olumsuz ne kadar etkilediğini verilen 1'den 7'ye kadar olan ölçekte uygun yeri işaretleyerek belirtiniz.

1. Hayatımda deprem, kasırga veya sel gibi doğal afetlere şahit oldum ya da bizzat yaşadım.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

2. Yaşamımı tehdit eden bir kaza yaşadım, örn. trafik kazası.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

3. Savaşa veya çatışmaya katıldım veya maruz kaldım, veya teröre maruz kaldım.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

4. Ebeveynlerimin, yakın bir arkadaşımın veya sevdiğim birinin ani ölümünü yaşadım.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

5. Sevdiklerimin, örneğin ebeveynlerimin veya yakın arkadaşlarımın, ölümcül veya kalıcı hasar bırakan bir olay yaşamasına şahit oldum.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

6. Yaşamımı tehdit eden bir hastalık ya da kalıcı hasar bırakan bir olay yaşadım. (örneğin kanser, felç, ciddi kronik hastalık veya ciddi yaralanma).

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

7. Silahlı bir soygun yaşadım (soygun ya da saldırı).

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

8. Bir tanıdığın ya da bir yabancının şiddetli bir saldırıya uğramasına şahit oldum (örneğin: silahla vurulma, terör saldırısında yaralanma veya hayatını kaybetme, bıçaklanma, şiddetli dövülme).

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

9. Öldürülmek veya ciddi olarak zarara uğratılmakla tehdit edildim.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

10. Bana bakım veren biri, örneğin ebeveynim tarafından fiziksel tacize uğradım, yaralanmama sebep olacak derecede itildim veya dövüldüm.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

11. Bana bakım veren birinin ya da ebeveynimin, bakım veren başka birine ya da diğer ebeveynime vurduğunu, canını acıttığını ya da ölümle tehdit ettiğini duydum veya gördüm.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

12. Benden yaşça büyük biri tarafından cinsel ilişkiye yönlendirildim.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

13. Bir veya birden fazla kişi tarafından tecavüze veya cinsel tacize uğradım veya istenmeyen cinsel ilişkiye maruz kaldım.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

14. Hapse girdim ve/veya işkence gördüm.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

15. Ben küçükken annem beni terk etti veya birbirimizden ayrı kaldık.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

16. Ben küçükken babam beni terk etti veya birbirimizden ayrı kaldık.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? __________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

17. Etnik kimliğim, ırkım, kültürüm, dinim veya ulusal kökenimden dolayı başkalarının olumsuz tutumları, kalıp yargıları veya davranışları ile aşağılandım, tehdit edildim veya ayrımcılığa uğradım.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? __________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

18. Ebeveynlerim boşandı veya ayrıldı.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? __________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

19. Irkımın tarihçesinde baskı görme, ayrımcılığa uğrama veya soykırımla tehdit edilme bulunmaktadır.

Hiçbir zaman( ) Biraz ( ) Kısmen( ) Orta düzeyde( ) Çok fazla( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? __________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

20. Görünürde küçük ama tekrarlayan veya hiç kesilmeyen sorunlar veya kronik stres yüzünden sinir krizi geçirdim veya geçirmek üzere gibi hissettim (örneğin kontrolümü kaybedecekmiş gibi).

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? __________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

21. Ebeveynlerimden veya kardeşlerimden en az biri savaşa veya çatışmaya katıldı veya işkence gördü.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? __________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

22. Okulda sıklıkla başarısızlıklar yaşadım.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

23. Köy, şehir veya ülkemdeki yakın çevremden uzaklaştırıldım ve yer değiştirmeye zorlandım.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

24. Daha güçlü kişi veya kişiler tarafından fiziksel saldırıya uğradım, dövüldüm ve yaralandım.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

25. Bana bakım veren biri/ebeveyn tarafından cinsel ilişkide bulunmaya yönlendirildim.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

26. Toplumsal cinsiyetimden (kız/kadın veya oğlan/adam) dolayı toplumda; başkalarının olumsuz tutumları, kalıp yargıları veya davranışları sebebiyle ya da kurumlar tarafından (aile üyeleri dışında) aşağılandım, haklarım reddedildi, ayrımcılığa uğradım.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

27. İlişkilerimde ciddi reddedilme veya başarısızlık yaşadım.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

28. Eş veya evlat kaybı yaşadım.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

29. İşime son verildi, işten atıldım veya iş yaşamımda başarısızlığa uğradım.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

30. Tekrar evlendim.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

31. Düşük gelirli ve birçok zorluk yaşayan bir ailenin üyesi oldum.

Hiçbir zaman yoksul değildi( ) Biraz yoksuldu( ) Gerçekten yoksuldu( )

Çok yoksuldu( ) Son derece yoksuldu( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

32. Toplumsal cinsiyetimden: erkek veya kız olmamdan dolayı bazı aile üyelerim (örn., ebeveynler, kardeşler) tarafından aşağılandım, tehdit edildim veya ayrımcılığa uğradım.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

33. Başka bir kişiye zarar vermek zorunda kaldım.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

34. Şiddet ve yasa dışı olayların sık olduğu bir mahallede yaşadım.

Hiçbir zaman( ) Bir kez( ) İki kez( ) Üç kez( ) Pek Çok kez( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? _________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

35. Doğumumun zor bir doğum olduğu söylendi.

Hiç zor değil( )   Biraz zor( )   Zor( )   Çok zor( )

Aşırı zor (yaşamımı tehdit eden)( )

- Böyle bir olay yaşadıysanız ilk seferinde kaç yaşındaydınız? __________
- Böyle bir olay yaşadıysanız bu sizi nasıl etkiledi?

| Son derece olumlu 1 | Çok olumlu 2 | Biraz Olumlu 3 | Ne olumlu ne olumsuz 4 | Biraz Olumsuz 5 | Çok olumsuz 6 | Son derece olumsuz 7 |
|---|---|---|---|---|---|---|

## APPENDIX D. THE IMPACT OF EVENT SCALE – REVISED (IES-R)

Aşağıda, stresli yaşam olaylarından sonra insanların yaşayabileceği bazı zorlukların bir listesi sunulmuştur. Her cümleyi dikkatlice okuyunuz. **GEÇTİĞİMİZ YEDİ GÜN İÇERİSİNDE**, yaşadığınız sizi zorlayan travmatik olayları düşünerek, bu zorlukların sizi ne kadar rahatsız ettiğini cümlelerin sağındaki beş kutucuktan yalnızca birini işaretleyerek belirtiniz.

| | **Hiç 0** | **Biraz 1** | **Orta Düzeyde 2** | **Fazla 3** | **Çok fazla 4** |
|---|---|---|---|---|---|
| 1. Olayları hatırlatan her türlü şey, kazayla ilgili duygularımı yeniden ortaya çıkardı. | *0* | *1* | *2* | *3* | *4* |
| 2. Uykuyu sürdürmekte güçlük çektim. | *0* | *1* | *2* | *3* | *4* |
| 3. Başka şeyler benim olaylar hakkında düşünmeyi sürdürmeme neden oldu | *0* | *1* | *2* | *3* | *4* |
| 4. Alıngan ve kızgın hissettim. | *0* | *1* | *2* | *3* | *4* |
| 5. Olayları düşündüğümde ya da hatırladığımda, bu konunun beni üzmesine izin vermedim. | *0* | *1* | *2* | *3* | *4* |
| 6. Düşünmek istemediğim halde olayları düşündüm. | *0* | *1* | *2* | *3* | *4* |
| 7. Olaylar hiç olmamış ya da gerçek değilmiş gibi hissettim. | *0* | *1* | *2* | *3* | *4* |
| 8. Olayları hatırlatan şeylerden uzak durdum. | *0* | *1* | *2* | *3* | *4* |
| 9. Olaylarla ilgili görüntüler aniden zihnimde canlandı. | *0* | *1* | *2* | *3* | *4* |
| 10. Ürkek ve diken üstünde hissettim. | *0* | *1* | *2* | *3* | *4* |
| 11. Olaylar hakkında düşünmemeye çalıştım. | *0* | *1* | *2* | *3* | *4* |
| 12. Olaylarla ilgili olarak hala pek çok duygum vardı, ancak bunlarla hiç ilgilenmedim. | *0* | *1* | *2* | *3* | *4* |

| | Hiç<br>0 | Biraz<br>1 | Orta Düzeyde<br>2 | Fazla<br>3 | Çok fazla<br>4 |
|---|---|---|---|---|---|
| 13. Olaylarla ilgili hissizleşmiş gibiydim. | *0* | *1* | *2* | *3* | *4* |
| 14. Kendimi olayların olduğu andaki gibi davranırken veya hissederken bulduğum oldu. | *0* | *1* | *2* | *3* | *4* |
| 15. Uykuya dalmakta güçlük çektim. | *0* | *1* | *2* | *3* | *4* |
| 16. Olaylarla ilgili çok yoğun duygu değişiklikleri yaşadım. | *0* | *1* | *2* | *3* | *4* |
| 17. Olayları hafızamdan (belleğimden) silmeye çalıştım. | *0* | *1* | *2* | *3* | *4* |
| 18. Dikkatimi toplamakta zorlandım. | *0* | *1* | *2* | *3* | *4* |
| 19. Olayları hatırlatan şeyler fiziksel tepkiler göstermeme neden oldu (örneğin terleme, nefes almada güçlük, baş dönmesi, kalp çarpıntısı, gibi). | *0* | *1* | *2* | *3* | *4* |
| 20. Olaylarla ilgili rüyalar gördüm. | *0* | *1* | *2* | *3* | *4* |
| 21. Kendimi tetikte ve savunma durumunda hissettim. | *0* | *1* | *2* | *3* | *4* |
| 22. Olaylar hakkında konuşmamaya çalıştım. | *0* | *1* | *2* | *3* | *4* |

## APPENDIX E. THE POSTTRAUMATIC GROWTH INVENTORY (PTGI)

Aşağıda yer alan her cümleyi dikkatle okuyunuz. **Yaşadığınız sizi zorlayan travmatik olayların sonrasında,** yaşamınızın bu olaya bağlı olarak **ne derece değiştiğini** aşağıdaki ölçekte uygun rakamı daire içine alarak belirtiniz.

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

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

## APPENDIX F. THE SOCIAL ADAPTATION SELF-EVALUATION SCALE (SASS)

Aşağıdaki soruları şu anki fikrinize göre cevaplamanız istenmektedir. Lütfen tüm soruları cevaplayınız ve her soru için bir cevabı işaretleyiniz.

Bir işiniz var mı? Evet Hayır

*Cevabınız Evet ise:*

1. İşinize ilginiz nasıl?
( ) Çok ( ) Orta ( ) Az ( ) Hiç yok

*Cevabınız Hayır ise:*

2. Ev işlerine ilginiz nasıl?
( ) Çok ( ) Orta ( ) Az ( ) Hiç yok

3. İşinizi ya da ev işlerini yaparken:
( ) Çok zevk alıyorum ( ) Orta düzeyde zevk alıyorum
( ) Az zevk alıyorum ( ) Hiç zevk almıyorum

4. Hobi ya da boş zaman etkinliklerine ilginiz var mı?
( ) Çok ( ) Orta ( ) Az ( ) Hiç yok

5. Boş zamanlarınızın niteliği nasıl?
( ) Çok iyi ( ) İyi ( ) Fena değil ( ) Tatmin edici değil

6. Aile fertlerinizle (eş, çocuklar, ebeveyn vb.) ne sıklıkla temas kurmaya çalışırsınız?
( ) Çok sık ( ) Sık ( ) Nadiren ( ) Hiç

7. Aile içi ilişkilerinizin durumu nasıl?
( ) Çok iyi ( ) İyi ( ) Fena değil ( ) Tatmin edici değil

8. Ailenizin dışında sosyal ilişkileriniz var mı?
( ) Birçok insanla var ( ) Birkaç insanla var
( ) Pek az insanla var ( ) Hiç kimseyle yok

9. Başkalarıyla ilişki kurmaya ne kadar gayret edersiniz?
( ) Çok gayret ederim ( ) Gayret ederim
( ) Orta derecede gayret ederim ( ) Gayret etmem

10. Başkalarıyla olan ilişkilerinizi genel olarak nasıl değerlendirirsiniz?

( ) Çok iyi ( ) İyi ( ) Fena değil ( ) Tatmin edici değil

11. Başkalarıyla ilişkinize ne kadar değer verirsiniz?

( ) Çok değer veririm ( ) Değer veririm

( ) Çok az değer veririm ( ) Hiç değer vermem

12. Sosyal çevrenizdeki insanlar sizinle ne sıklıkla temas kurmaya çalışırlar?

( ) Çok sık ( ) Sık ( ) Nadiren ( ) Hiç

13. Sosyal kurallara, iyi davranışlara, nezakete vb. dikkat eder misiniz?

( ) Her zaman ( ) Sıklıkla ( ) Nadiren ( ) Hiç

14. Sosyal hayatın (cemiyet, toplantı ve benzerleri) ne ölçüde içindesiniz?

( ) Tamamen ( ) Orta derecede ( ) Az ( ) Hiç

15. Çeşitli şeyleri, durumları ve insanları daha iyi anlamak için bilgi edinmekten ne kadar hoşlanırsınız?

( ) Çok ( ) Orta ( ) Az ( ) Hiç

16. Bilimsel, teknik ya da kültürel bilgiye ne kadar ilgi duyarsınız?

( ) Çok ( ) Orta ( ) Az ( ) Hiç

17. İnsanlara fikirlerinizi ifade etmekte ne sıklıkla güçlük çekersiniz?

( ) Her zaman ( ) Sıklıkla ( ) Bazen ( ) Hiçbir zaman

18. Kendinizi çevrenizden ne sıklıkla reddedilmiş, dışlanmış hissedersiniz?

( ) Her zaman ( ) Sıklıkla ( ) Bazen ( ) Hiçbir zaman

19. Fiziksel görünümünüzü ne kadar önemsersiniz?

( ) Çok ( ) Orta ( ) Pek değil ( ) Hiç

20. Geçim kaynaklarınızı ve gelirinizi idare etmekte ne kadar zorluk çekersiniz?

( ) Her zaman ( ) Sıklıkla ( ) Bazen ( ) Hiçbir zaman

21. Çevrenizi kendi istek ve ihtiyaçlarınıza göre düzenleyebileceğinizi hisseder misiniz?

( ) Fazlasıyla ( ) Orta ( ) Pek değil ( ) Hiç

## APPENDIX G. GENERAL SELF-EFFICACY SCALE (GSE)

Aşağıda, günlük yaşamınızda karşılaşabileceğiniz bazı durumlarla ilgili ifadeler vardır. Sizlerden istenilen bu durumların sizin için ne derecede doğru olduğunu derecelemenizdir. Lütfen, bu durumların şu anda sizin için ne kadar doğru düşünerek her bir madenini önünde buluna boşluğa (X) işaretini koyunuz. Lütfen hiçbir maddeyi boş bırakmayınız.

| **Maddeler** | **Doğru değil** | **Biraz doğru** | **Daha doğru** | **Tümüyle doğru** |
|---|---|---|---|---|
| **1-** Yeni bir durumla karşılaştığımda ne yapmam gerektiğini bilirim. | 1 | 2 | 3 | 4 |
| **2-** Beklenmedik bir durumda nasıl davranmam gerektiğini bilirim. | 1 | 2 | 3 | 4 |
| **3-** Bana karşı çıkıldığında kendimi kabul ettirecek çare ve yolları bulurum. | 1 | 2 | 3 | 4 |
| **4-** Ne olursa olsun üstesinden gelirim. | 1 | 2 | 3 | 4 |
| **5-** Güç sorunların çözümünü eğer gayret edersem bulabilirim. | 1 | 2 | 3 | 4 |
| **6-** Planlarımı gerçekleştirmek ve hedeflerime ulaşmak bana zor gelmez. | 1 | 2 | 3 | 4 |
| **7-** Bir sorunla karşılaştığımda onu çözebilmeye yönelik birçok fikrim vardır. | 1 | 2 | 3 | 4 |
| **8-** Yeteneklerime güvendiğim için, zorlukları soğukkanlılıkla karşılarım. | 1 | 2 | 3 | 4 |
| **9-** Aniden gelişen olayların üstesinden gelebileceğimi sanıyorum. | 1 | 2 | 3 | 4 |
| **10-** Her sorun için bir çözümüm vardır. | 1 | 2 | 3 | 4 |

# APPENDIX H . INTERRATER FORM

**Alt Ölçekler**

| **1. Ölüm-kalım Travmaları (Doğal yollarla oluşan)** | Doğal yolla oluşan ölüm kalım travmaları, bireylerin fiziksel bütünlüğünü tehdit eden ve sadece doğal yollara bağlı olarak meydana gelen travma yaşantılarını içermektedir. Bu tip travmalara doğrudan maruz kalınabildiği gibi gözlemlemek de benzer etkilere yol açabilir. |
|---|---|
| **2. Ölüm-kalım Travmaları (İnsan eliyle oluşan)** | İnsan eliyle oluşan ölüm kalım travmaları, bireylerin fiziksel bütünlüğünü doğrudan tehdit eden ve doğal nedenlerle meydana gelmeyen olayları içermektedir. Bu tip travmalara doğrudan maruz kalınabildiği gibi gözlemlemek de benzer etkilere yol açabilir. |
| **3. Kişisel Kimlik Travmaları (Cinsel travmalar, ilişkisel ve akademik başarısızlıklar)** | Kişisel kimlik travmaları, bireyin sağlıklı kimlik oluşturma süreci boyunca maruz kaldığı benliğinin dönüşümüne ve bellek konsolidasyon sürecine zarar verebilecek olayları içermektedir. Bu tip travmalar bireyin özerkliğine ket vurabileceği gibi güvenlik ve aidiyet duygularını zedeler. Ayrıca bireyler kimlik oluşturma süreçlerinde idealleri doğrultusunda kendileri için hedefler koyarlar. Bu hedeflere ulaşmadaki maddi ve manevi engeller de kişisel kimlik travmalarına neden olur. |
| **4. Toplumsal Kimlik Travmaları (Tarihsel travmalar, ayrımcılık)** | Toplumsal kimlik travmaları, bireylerin veya toplumların renklerine, etnik kökenlerine veya dinlerine dayalı olarak; bireyler veya diğer toplumlar tarafından yaratılan ve toplumsal eşitsizliklere dayanan olayları içermektedir. Bu tip travmalarda yaşanılan olay tek seferlik olabileceği gibi sistematik olarak da devam edebilmektir, travmanın etkileri nesiller boyunca aktarılır. Toplum tarafından yaratılan ve toplumsal eşitsizliklere dayanan yapısal bir şiddet olarak görülmektedir. |
| **5. Aile – Bağlanma Travmaları** | Aile ve bağlanma travmaları, özellikle çocukluk döneminde ebeveynlerle ve ergenlik-yetişkinlik döneminde önemli diğerleriyle kurulan ilişkilerde yaşanılan stresli olayları içermektedir. Bu tip travmalar temel ihtiyaçlar içinde yer alan "güvenlik ve sıcaklık duyguları" karşılanmaması veya sekteye uğraması durumunda gözlemlenir. |

**Aşağıdaki maddelerin hangi alt ölçeğe uygun olduğunu yanındaki kutucuğa alt ölçeğin numarasını yazarak gösteriniz. Birden fazla alt ölçeğe uygun olduğunu düşündüğünüz ve kararsız kaldığınız maddeler için ikinci tercihi de belirtebilirsiniz (ilk sıraya ilk tercihinizin yazılması istenmektedir).**

| | **ÖLÇEK** |
|---|---|
| Hayatımda deprem, kasırga veya sel gibi doğal afetlere şahit oldum ya da bizzat yaşadım | |
| Yaşamımı tehdit eden bir kaza yaşadım, örn. trafik kazası | |
| Savaşa veya çatışmaya katıldım veya maruz kaldım | |
| Ebeveynlerimin, yakın bir arkadaşımın veya sevdiğim birinin ani ölümünü yaşadım. | |
| Sevdiklerimin, örneğin ebeveynlerimin veya yakın arkadaşlarımın, ölümcül veya kalıcı hasar bırakan bir olay yaşamasına şahit oldum | |
| Yaşamımı tehdit eden bir hastalık ya da kalıcı hasar bırakan bir olay yaşadım. (örneğin kanser, felç, ciddi kronik hastalık veya ciddi yaralanma). | |
| Silahlı bir soygun yaşadım (soygun ya da saldırı). | |
| Bir tanıdığın ya da bir yabancının şiddetli bir saldırıya uğramasına şahit oldum (örneğin: silahla vurulma, bıçaklanma, şiddetli dövülme). | |
| Öldürülmek veya ciddi olarak zarara uğratılmakla tehdit edildim. | |
| Bana bakım veren biri, örneğin ebeveynim tarafından fiziksel tacize uğradım, yaralanmama sebep olacak derecede itildim veya dövüldüm. | |

| Bana bakım veren birinin ya da ebeveynimin, bakım veren başka birine ya da diğer ebeveynime vurduğunu, canını acıttığını ya da ölümle tehdit ettiğini duydum veya gördüm. |
| --- |
| Benden yaşça büyük biri tarafından cinsel temasa yönlendirildim. |
| Bir veya birden fazla kişi tarafından tecavüze veya cinsel tacize uğradım veya istenmeyen cinsel ilişkiye maruz kaldım. |
| Hapse girdim ve/veya işkence gördüm. |
| Ben küçükken annem beni terk etti veya birbirimizden ayrı kaldık. |
| Ben küçükken babam beni terk etti veya birbirimizden ayrı kaldık. |
| Etnik kimliğim, ırkım, kültürüm, dinim veya ulusal kökenimden dolayı başkalarının olumsuz tutumları, kalıp yargıları veya davranışlarını ile aşağılandım, tehdit edildim veya ayrımcılığa uğradım. |
| Ebeveynlerim boşandı veya ayrıldı. |
| Irkımın tarihçesinde baskı görme, ayrımcılığa uğrama veya soykırımla tehdit edilme bulunmaktadır. |
| Görünürde küçük ama tekrarlayan veya hiç kesilmeyen sorunlar veya kronik stres yüzünden sinir krizi geçirdim veya geçirmek üzere gibi hissettim (örneğin kontrolümü kaybedecekmiş gibi). |
| Ebeveynlerimden veya kardeşlerimden en az biri savaşa veya çatışmaya katıldı veya işkence gördü. |
| Okulda sıklıkla başarısızlıklar yaşadım. |
| Köy, şehir veya ülkemdeki yakın çevremden uzaklaştırıldım ve yer değiştirmeye zorlandım. |

| Daha güçlü kişi veya kişiler tarafından fiziksel saldırıya uğradım, dövüldüm ve yaralandım. |
| --- |
| Bana bakım veren biri/ebeveyn tarafından cinsel ilişkide bulunmaya yönlendirildim. |
| Toplumsal cinsiyetimden (kız/kadın veya oğlan/adam) dolayı başkalarının olumsuz tutumları, kalıp yargıları veya davranışlarından, ya da kurumlar tarafından toplumda (aile üyeleri dışında) aşağılandım, haklarım reddedildi, ayrımcılığa uğradım. |
| İlişkilerimde ciddi reddedilme veya başarısızlık yaşadım. |
| Eş veya evlat kaybı yaşadım. |
| İşime son verildi, işten atıldım veya iş yaşamımda başarısızlığa uğradım. |
| Tekrar evlendim. |
| Düşük gelirli ve birçok zorluk yaşayan bir ailenin üyesi oldum. |
| Toplumsal cinsiyetimden: erkek veya kız olmamdan dolayı bazı aile üyelerim (örn., ebeveynler, kardeşler) tarafından aşağılandım, tehdit edildim veya ayrımcılığa uğradım. |
| Başka bir kişiye zarar vermek zorunda kaldım. |
| Şiddet ve yasa dışı olayların sık olduğu bir mahallede yaşadım. |
| Doğumumun zor bir doğum olduğu söylendi. |

# APPENDIX I. ETHICAL APPROVAL OF METU HUMAN SUBJECT ETHICS COMMITTEE

UYGULAMALI ETİK ARAŞTIRMA MERKEZİ
APPLIED ETHICS RESEARCH CENTER

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
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Sayı: 28620816 /

02 OCAK 2018

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof.Dr. Ayşe Nuray KARANCI;

Danışmanlığını yaptığınız Selen ELTAN'ın **"Kümülatif Ölçeğinin Psikometrik Özellikleri: Türk Örnekleminde Geçerli ve Güvenirliğin Değerlendirilmesi"** başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek gerekli onay **2017-SOS-227** protokol numarası ile **02.01.2018-30.12.2018** tarihleri arasında geçerli olmak üzere verilmiştir.

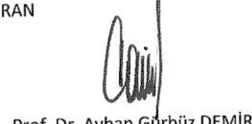
Bilgilerinize saygılarımla sunarım.

Prof. Dr. Ş. Halil TURAN

Başkan V

Prof. Dr. Ayhan SOL

Üye

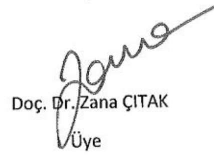


Prof. Dr. Ayhan Gürbüz DEMİR

Üye

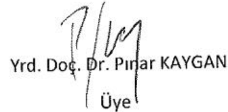
Doç. Dr. Yaşar KONDAKÇI

Üye



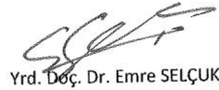
Doç. Dr. Zana ÇITAK

Üye



Yrd. Doç. Dr. Pınar KAYGAN

Üye



Yrd. Doç. Dr. Emre SELÇUK

Üye

# APPENDIX J. TURKISH SUMMARY / TÜRKÇE ÖZET

# KÜMÜLATİF TRAVMA ÖLÇEĞİNİN PSİKOMETRİK ÖZELLİKLERİ: GEÇERLİK VE GÜVENİRLİĞİN TÜRK ÖRNEKLEMİNDE İNCELENMESİ

## 1. GİRİŞ

### 1.1. Travma

Travma kavramı, DSM-5'de "ölüm tehdidi, ciddi yaralanma veya cinsel şiddete maruziyet" olarak tanımlanmıştır. En çok karşılaşılan travmatik olaylar trafik kazaları, doğal afetler, sevilen birinin beklenmedik kaybı, hayatı tehdit eden hastalıklar şeklinde sıralanabilir (Frans, Rimmö, Aberg ve Fredrikson, 2005; Karanci ve ark., 2012). Travma deneyiminin yaygınlık oranı ise %56 ile %90 arasında değişmektedir (Boals, Riggs ve Kraha, 2013; Karanci ve ark., 2012).

### 1.2. Travmanın Etkileri

Travmatik olayların etkileri bireyin kişiliği, olayın özellikleri, deneyimin anlamı ve sosyokültürel faktörler gibi faktörlere bağlı olarak farklılık gösterebilir. Bremner ve Marmer (1998) travmanın etkilerini depresyon, ilgi kaybı, hafıza ve uyku bozuklukları olarak özetlemiştir. Travmatik olayların ardından duyguların düzenlenmesinde de zorluklar yaşandığı görülmektedir (Badour, Resnick ve Kilpatrick, 2017).

#### 1.2.1. Travma Sonrası Stres Bozukluğu

TSSB'nin yaygınlığı genel popülasyonda %7.4 ile % 12.4 arasında değişmektedir (de Vries ve Olff, 2009; Karanci ve ark., 2012; Peltzer ve ark., 2007). Genellikle TSSB, diğer ruhsal bozukluklarla eş zamanlı görülebilmektedir. Literatürde yapılan çalışmalar, kadın cinsiyetinin, bilişsel zayıflıkların, ruhsal bozukluk öyküsü ve daha önceki travmatik olaylara maruz kalmanın TSSB belirtileriyle ilişkili olduğu bildirilmektedir (Sareen, 2014; Tolin ve Foa, 2006). Ek

olarak, nevrotik kişilik özellikleri olan ve kaçınma başa çıkma stratejilerini kullanma eğiliminde olan kişilerin travma sonrası reaksiyonlara daha yatkın olarak gösterilmiştir (Sareen, 2014).

Ayrıca, Herman (1992) kompleks TSSB kavramını önermiştir ve bunu erken çocukluk döneminde yaşanan ve belirli bir süre devam eden travmalardan sonra görülen patolojik bir sonuç olarak tanımlamıştır. Kompleks TSSB ile çocukluk çağı travmalarının vurgulamanmasının bir nedeni, erken yaşam travmalarının yetişkin travmalarının nasıl yaşanacağı konusunda belirleyici bir rol oynamasıdır (Cloitre ve ark., 2009).

#### 1.2.2. Travma Sonrası Gelişim

Travma sonrası gelişim, yaşanılan travmatik olayla psikolojik olarak mücadele ettikten sonra kişisel gelişim hissine erişmeyi açıklamak için kullanılan bir terimdir (Tedeschi ve Calhoun, 1995). Yapılan birçok çalışma, travma sonrası gelişim oranının %50 civarında olduğunu göstermiştir (Xu ve Liao, 2011). Yapılan çalışmalar, kadın cinsiyeti, genç yaş, yüksek eğitim seviyesi ve daha yoğun travmatik yaşantılara maruz kalmanın (Xu ve Liao, 2011); kaderci başa çıkma stilinin (Bussell ve Naus, 2010); dışadönüklük, yumuşak başlılık ve özdenetim kişilik özelliklerinin (Owens, 2016) travma sonrası gelişim ile ilişkili olduğunu göstermektedir.

### 1.3. Travmaların Travmatik Tepkilere Etkisi Üzerine Modeller

Hobfoll (1989) tarafından tasarlanan Kaynakların Korunması Teorisi'ne göre, kişisel ve sosyal özellikler, psikolojik stresle mücadele ederken bireylerin kaynaklarıdır ve travmatik yaşam olayı sonucunda yaşanan kaynak kaybı kişilerin baş etme yeteneği üzerinde bir etkiye sahip olarak travma sonrası tepkileri ortaya çıkarır. Brewin, Dalgleish ve Joseph (1996) tarafından önerilen İkili Temsil Kuramı ise, *durumsal erişilebilir hafızalar* ve *sözlü olarak erişilebilir hafızalar* arasındaki bilginin tutarsızlığı ile TSSB'nin gelişimini açıklamaktadır. Diğer bir model, Parkinson (2000) tarafından ortaya atılmıştır ve olay öncesi, olay içi ve olay sonrası faktörlerin önemine vurgu yapar.

Yapılan travma çalışmaları, yalnızca travmatik olayların olumsuz sonuçlarına odaklanmak yerine bu olaylarla başa çıkmanın bir sonucu olarak pozitif dönüşümleri

de incelemektedir. Tedeschi ve Calhoun (1995) tarafından tanımlanan *travma sonrası gelişim* olumlu dönüşümlerden birisidir. Travma sonrası büyümeyi kavramsal olarak açıklamayan modeller de mevcuttur (Schaefer ve Moss, 1992; Tedeschi ve Calhoun, 2004).

### 1.4. Travmatik Tepkilerle ilgili Faktörler

Literatürde kadınların daha çok tavmaya maruz kaldığını gösteren çalışmalar yer alırken (Kilpatrick ve ark., 2013), erkeklerin daha fazla travmatik olay deneyimlediğini gösteren ya da cinsiyetler arası bir fark göstermeyen çelişkili çalışma sonuçları da bulunmaktadır (Gwadz, Nish, Leonard ve Strauss, 2007). Cinsiyetlerarası farklılık daha çok travmatik olay türlerinde tespit edilmiştir (Perkonigg, Kessler, Storz ve Wittchen, 2000). Ek olarak, kişilik özelliklerinin (Aleksandra, Tanja ve Eric, 2016); bireyin sahip olduğu destek sisteminin (Littleton, Horsley, John ve Nelson, 2007) TSSB gelişiminde veya travma sonrası iyileşmede diğer önemli parametreler olduğu belirtilmektedir. Son olarak, travmatik olayın türü, süresi ve sıklığı travma sonrası verilen tepkileri yordama da oldukça önemlidir. Sıklıkla deneyimlenen ve süreğen travmatik yaşantılar (Goral, Lahad ve Aharonson-Daniel, 2017) daha şiddetli travma sonrası semptomlara yol açmaktadır.

### 1.5. Kümülatif Travma

Follette, Polusny, Bechtle ve Naugle (1996) bireyin yaşamı boyunca birden çok kez meydana gelen belirli bir türden olumsuz olayın ya da farklı travma türlerinin toplam sayısı olarak yansıtılan, çoklu mağduriyet deneyimlerinin etkilerinin birikimini tanımlamak üzere *kümülatif travma* kavramını ortaya koymuştur. Yapılan araştırmalar birçok insanın yaşamlarının birçok noktasında potansiyel travmatik olaylara maruz kaldığını göstermektedir (Benjet ve ark., 2016; Karancı ve ark., 2012). Travma literatüründe, travmatik deneyimlerin sayısı arttıkça, TSSB'nin daha sık gözlemlendiği ve semptomların şiddetinin çarpıcı bir şekilde arttığı gösterilmiştir (Hauff, Fry-McComish ve Chiodo, 2016).

### 1.5.1. Travmaya Yeni Bir Bakış Açısı: Gelişim Temelli Travma Çerçevesi

Kümülatif travma alanındaki artan araştırma sonuçlarına dayanarak, Kira (2012), üç geçerli travma paradigmasını (psikiyatrik, gelişimsel ve gruplar arası paradigma) birleştirerek Gelişimsel Temelli Travma Çerçevesini (DBTF) geliştirmiştir. Böylece, travmaların bireyler üzerindeki kümülatif etkileri daha geniş bir perspektiften görülmüştür (Kira, 2012). Ayrıca, DBTF *yatay* (olayın kökeni veya türü) ve *dikey* (travmanın şiddeti, sıklığı ve kronikliği) olarak tanımlanan iki boyutu temsil etmektedir. Travmatik olaylar birbirinden tamamen ayrılmaz ve olaylar hem yatay hem de dikey boyutlarıyla değerlendirilebilir.

### 1.5.2. Travma Taksonomisi

Kira (2001) DBTF'yi destekleyen yapısal bir sınıflandırma içeren "travma taksonomisi" önermiştir. Olaylar sınıflandırılırken net sınırlar yoktur, bir travmatik bir deneyim birden fazla kategorinin özelliklerine uyabilir. Birincil sınıflandırma kategorisinde, travmatik olaylar bireyin işlevini etkilemesi yönünden değerlendirilmektedir. Bu travmalar, *bağlanma travması*, *kimlik travması*, *bağımlılık travması*, *başarı travmaları, hayatta kalma travmaları* olarak sıralanabilir. İkincil sınıflandırma kategorisinde travmalar objektif özelliklerine göre değerlendirilmektedir. Bu kategorideki travmalar, *gerçek-yapay*, *insan-doğa yapımı,* veya *toplum tarafından* yapılan travmalar olarak tanımlanmaktadır. Bununla birlikte, doğrudan travmatik deneyimler, tek bir olayın sık sık ortaya çıktığı ya da farklı olayların birlikte gerçekleştiği kümülatif bir şekilde de olabilmektedir: *Tip I, II, III* ve *IV* (Kira, 2001; 2012).

## 1.6. Travma Çalışmalarında Kullanılan Ölçekler

Travma literatüründe, travmatik yaşantıları araştırmak için geçerli ve güvenilir araçlar bulunmaktadır (Steel, Dunlavy, Stillman ve Pape, 2011). Türkiye'de bu ölçeklerin bazılarının uyarlanmış hali mevcuttur. Ancak, bu ölçeklerin kullanıldığı çalışmalarda genellikle tek yaşantı baz alınmaktadır. Yani, bu ölçekler maruz kalınan kümülatif travmatik olayların olası etkilerini dikkate almamaktadır.

## 1.7. Kümülatif Travma Ölçeği

Kümültif Travma Ölçeği-Kısa Form (KTÖ-K), Kira ve arkadaşları (2008) tarafından, travma taksonomisi ve Gelişim Temelli Travma Çerçevesi göz önünde bulundurularak geliştirilmiştir. Ölçek, 35 maddeden oluşmakta ve Likert tipi ölçekle değerlendirilmektedir. *Oluşma* parametresi için, kişiler olayı frekans ölçeğinde yaşamış olup olmadıklarını değerlendirmektedirler. Daha sonra, olay yaşandıysa, kişi olayın kaç kez gerçekleştiğini *sıklık* parametresinde derecelendirmektedir. *Yaş* parametresinde, kişiye olay ilk yaşandığında kaç yaş olduğu sorulurken; *değerlendirme* parametresinde kişiden bu deneyimden 7'li Likert tipi skala üzerinden ne kadar etkilendiğini (olumsuz veya olumlu olarak) ifade etmesi istenmektedir.

### 1.7.1. Kümülatif Travma Ölçeği-Kısa Form'un Hesaplanması

İlk parametre, *olma durumu*, olayın yaşam hikayelerinde olup olmadığına dair bireylerin cevapları sayılarak hesaplanmaktadır. Eğer olay yaşandıysa, kaç kez meydana geldiğine verilen yanıt kümülatif travmaların *sıklığını* hesaplamak için kullanılmaktadır. Travma gerçekleşmediyse 0 olarak, bir kez ise 1, iki kez ise 2, üç kez ise 3 ve üç kezden fazla ise 4 olarak kodlanmaktadır. Ayrıca, olayın *değerlendirmesi* genel değerlendirme olarak veya iki farklı değerlendirme alt ölçeği (olumsuz ve olumlu) oluşturularak hesaplanabilmektedir: Pozitif değerlendirme ölçeği için (4=1, 3=2, 2=3, 1=4) olarak ve negatif değerlendirme ölçeği için (5=1, 6=2, 7=3) şeklinde yeniden kodlama yapılmaktadır. Son olarak, *yaş* parametresi, travmanın ilk ne zaman gerçekleştiğini ve katılımcı tarafından belirtilen yaşı yansıtmaktadır.

### 1.7.2. Kümülatif Travma Ölçeği-Kısa Form'un Psikometrik Özellikleri

Kümülatif Travma Ölçeği-Kısa Form geçerli ve güvenilir bir araçtır. Yetişkin örnekleminde, erkeklerde ve kadınlarda yeterli iç tutarlılığa sahip olduğu belirtilmiştir. Ayrıca, test-tekrar test prosedürüne göre de güvenilir olduğu gösterilmiştir. (Kira ve ark., 2008; Kira, Fawzi ve Fawzi, 2013). Ayrıca, ölçeğin geçerliği yapı, eş zamanlı, ıraksak, ve öngörücü geçerlikler açısından incelenmiştir. Kira ve meslektaşlarının (2008) yaptığı faktör analizinde 6 alt ölçek ortaya çıkmıştır: *toplumsal kimlik, kişisel kimlik, hayatta kalma, bağlanma, ikincil ve aile*

*travmaları*dır. Daha sonra *başarı travmaları* ve *cinsiyet ayrımcılığı* alt ölçekleri de eklenmiştir.

### 1.8. Çalışmanın Amacı ve Hipotezler

Yaşam boyunca bir kerelik travmatik deneyim, kişilerarası, kültürlerarası ve nesillerarası bakış açılarından değerlendirildiğinde yalnızca bir istisnadır. Bu çalışmanın amacı da, Türk travma çalışmalarında kullanılabilecek güvenilir ve geçerli bir araç olup olmadığını değerlendirmek amacıyla Kümülatif Travma Ölçeği Kısa Formu'nu Türkçe'ye çevirmek ve psikometrik özelliklerini araştırmaktır.

Belirtilen amaçlara dayanarak, bu çalışmanın ana hipotezleri:

H1: Kümülatif Travma Ölçeği-Kısa Formu'nun uyarlanmış hali ile eş zamanlı geçerlik ölçekleri arasında anlamlı ve pozitif bir ilişki olacaktır.

H2: Kümülatif Travma Ölçeği-Kısa Formu'nun uyarlanmış versiyonu ile ıraksak geçerlik ölçekleri arasında zayıf bir korelasyon olacaktır.

H3: Yaşanan travmatik olayların türleri ve etkileri uyarlanan Kümülatif Travma Ölçeği-Kısa Formu'nda kadınlar ve erkekler için önemli ölçüde farklı olacaktır.

## 2. YÖNTEM

### 2.1. Katılımcılar

Çalışma kapsamında 445 kişiye ulaşılmıştır, ancak dahil edilmeyen katılımcılarla beraber 384 kişi ile çalışma yürütülmüştür. Örneklemin, %55.5'i kadın %44.5'i erkektir. Yaş ortalamaları ise 37.11'dir. Katılımcıların katılım ili, eğitim seviyesi, meslek grupları, medeni durumları, çalışma ve gelir durumları için Tablo 1 oluşturulmuştur.

### 2.2. Veri Toplama Araçları

Ölçek paketi, katılımcıların yaş, cinsiyet, eğitim seviyeleri gibi demografik özelliklerini görmek amacıyla hazıralanan Demografik Form (Ek B) ve aşağıda belirtilen ölçeklerden oluşmuştur. Ayrıca, ölçek paketine eklenmiştir.

#### 2.2.1. Kümülatif Travma Ölçeği-Kısa Formu (KTÖ-K)

Kira ve arkadaşları (2008), kişi tarafından bildirilen tüm travmatik deneyimlerin kümülatif etkisini değerlendirmek için Kümülatif Travma Ölçeğini geliştirmiştir. Ölçek 35 maddeye sahiptir ve her bir travma türü, sıklığı, yaşanma yaşı ve değerlendirmeleri içeren dört parametreye göre puanlanmaktadır (Ek C). KTÖ-K'nun geçerli ve güvenilir bir ölçek olduğu gösterilmiştir (Kira ve ark., 2008; Kira, Fawzi ve Fawzi, 2013).

#### 2.2.2. Olayın Etkisi Ölçeği (IES-R)

Weiss ve Marmar (1997) tarafından travma yaşantısı sonrası oluşan semptomları değerlendirmek amacıyla geliştirilmiştir ve 22 maddeli 5'li Likert tipi ölçekten oluşmaktadır. Ölçeğin, yeniden yaşama, kaçınma ve uyarılmada artış olarak adlandırılan üç alt ölçeği bulunmaktadır. Ölçeğin uyarlaması Çorapçıoğlu, Yargıç, Geyran ve Kocabaşoğlu (2006) tarafından yapılmıştır. İç tutarlılığı .94 olarak hesaplanan ölçeğin geçerlik çalışmaları da yürütülmüştür. Bu çalışmada ise tüm ölçeğin Cronbach alpha değeri .94 olarak hesaplanmıştır ve alt boyutlarına ait değerlerin .82 ile .92 arasında değiştiği görülmüştür (Ek D).

#### 2.2.3. Travma Sonrası Büyüme Envanteri (TSBE)

Tedeschi ve Calhoun (1996) tarafından geliştirilen ölçek, travmatik olaylara maruz kaldıktan sonra yaşanabilecek potansiyel pozitif sonuçları ölçmek amacıyla geliştirilmiştir. 21 maddeden oluşan ölçek 6'lı Likert üzerinden hesaplanmaktadır. Geçerlik ve güvenirlik analizleri de bulunmkatadır. Dirik ve Karancı (2008) tarafından ikinci kez uyarlaması yapılmıştır. Cronbach alpha değerleri tüm ölçek için .94 bulunmuştur ve üç alt boyutun değerlerinin .86 ve .88 arasında değiştiği gösterilmiştir. Bu çalışmada ise tüm ölçeğin iç tutarlılığı .95 iken; kendiliğin

algılanmasında değişiklikler alt boyutu için .92, hayat görüşü sistemindeki değişim için .87 ve kişilerarası ilişkilerde değişimler için .88'dir (Ek E).

#### 2.2.4. Sosyal Uyum Kendini Değerlendirme Ölçeği (SUKDO)

Bosc, Dubini ve Polin (1997) tarafından geliştirilen ölçek depresyon hastalarını değerlendirmek amacıyla hazırlanmıştır. 4'lü Likert üzerinden hesaplananan 21 madde içermektedir. Tek faktörlü olan ölçeğin iç tutarlılığı, test-tekrar test güvenirliği ve geçerlik analizleri bulunmaktadır. Türkçe uyarlaması Akkaya, Sarandöl, Esen-Danacı, Sivrioğlu, Kaya ve Kırlı (2008) tarafından yapılmış olup, geçerli ve güvenilir bir ölçüm aracı olduğu gösterilmiştir. Çalışmada ise, Cronbach alpha değeri .76 olarak bulunmuştur (Ek F).

#### 2.2.5. Genel Yetkinlik İnancı Ölçeği (GYİ)

Ölçeğin çalışmada kullanılan versiyonu Jerusalem ve Schwarzer (1992) tarafından hazırlanmıştır ve 5'li Likert üzerinden hesaplananan 10 madde içermektedir. Ölçeğin iç tutarlılığı .76 ile .90 arasında bulunmuştur. Ölçeğin adaptasyonu Çelikkaleli ve Çapri (2008) tarafından yapılmıştır. Tek faktörlü ölçeğin geçerlik ve güvenirliği gösterilmiştir. Bu çalışmada ise ölçeğin Cronbach alpha değeri .87 olarak bulunmuştur (Ek G).

### 2.3. Prosedür

Adaptasyon için ölçeğin sahibi İbrahim Kira'dan ve ODTÜ Etik Komitesi'nden gerekli etik izinler alınmıştır. Adaptasyon sürecinde, iki öğretim üyesi ölçeği Türkçeye çevirmişlerdir ve iki dile de hakim olan başka bir öğretim üyesi çevirileri değerlendirmiştir. Ölçek kullanılmadan önce anlam ve dilbilgisi açısından kontrol edilmiştir. Ölçek setinin son hali demografik form, çeviri ölçeği ve yukarıda bahsi geçen diğer ölçekleri içermiştir. Kartupu Örneklemi metodu ile 386 yetişkine ulaşılmıştır ve katılımcılar ölçeklerin bulunduğu soru setini ortalama 20 dakikada tamamlamışlardır. Ölçeklerin sırası çeviri ölçeği hep başta bulunmak üzere rastgele hale de getirilmiştir.

### 2.4. Veri Kodlaması ve İstatistiksel Analizler

*Olayın olma durumu*, *sıklık* ve *yaş* parametreleri orijinal çalışmaya bağlı kalınarak kodlanmıştır. *Değerlendirme* parametresinde ise olumlu ve olumsuz değerlendirmeleri bir arada kullanabilmek ve karşılaştırabilmek amacıyla ne olumlu ne olumsuz cevabı her iki değerlendirme için de 1 olarak kodlanmıştır. Olumsuz değerlendime ölçeğinde 1 (ne olumlu ne olumsuz), 2 (biraz olumsuz), 3 (çok olumsuz) ya da 4 (son derece olumsuz) kodlaması kullanılırken; olumlu değerlendirme ölçeğinde 1 (ne olumlu ne olumsuz), 2 (biraz olumlu), 3 (çok olumlu) ya da 4 (son derece olumlu) kodlaması kullanılmıştır. Ayrıca, analizlerde kullanılmak amacıyla, travmatik olayın sıklığını ve ne kadar etkilediğini gösteren puanlar çarpılarak birleşik bir puan oluşturulmuştur. Bu birleşik puanlar *KTÖ-K Negatif* (olumsuz etki için) ve *KTÖ-K Pozitif* (olumlu etki için) olarak tanımlanmıştır.

Veri analizleri için, betimsel istatistikler ve değerlendiriciler arası güvenirlik çalışmaları incelenmiştir. İç tutarlık puanı KTÖ-K ve alt kategorileri için hesaplanarak, geçerlik araştırması için ölçekler arasında korelasyon analizleri yürütülmüştür.

## 3. BULGULAR

### 3.1. Betimleyici İstatistikler

Kullanılan ölçeklerin tanımlayıcı özellikleri (ortalama, standart sapma, puan aralığı) Tablo 2'de sunulmuştur. Karşılaşılan ortalama travmatik olay sayısının tüm örneklemde 6.64 olduğu bildirilmiştir. Erkeklerin, kadınlardan travmanın miktar, sıklık ve olumsuz değerlendirmesi açısından anlamlı derecede farklı olmadığı gösterilmiştir. Bununla birlikte, erkeklerin travmaları kadınlardan daha olumlu değerlendirdikleri (KTÖ-K Pozitif skoru) t testi analizleri ile ortaya konmuştur.

Tablo 6'da görüldüğü gibi, çalışma, katılımcıların çoğunun yaşadığı travmatik olayın yakın birinin ölümü (%75.5) olduğunu ortaya koydu. Buna karşılık, ebeveynler tarafından cinsel tacize uğramak (%0.5) tüm örneklem tarafından en az yaşanmış olay olarak rapor edilmiştir. Erkek katılımcılar için yakın birinin ani ölümü

(%72.5), doğal afet (%67.3) ve kaza (%57.9) en çok yaşanan olaylardır. Çalışmanın kadın örnekleminde, doğal afet deneyimi (%80.3), yakın bir kişinin ani ölümü (%77.9) ve sinir krizi (%51.6) en çok deneyimlenen olaylardır.

Beklendiği gibi, kadın ve erkekler bazı olayları farklı yaşamaktadır. 2x2 Ki Kare analizleri, erkeklerin fiziksel olarak daha yaşlı biri tarafından saldırıya uğradıklarını, daha fazla kaza geçirdiğini, birine zarar verdiğini ve şiddet olan bir mahallede yaşadıklarını rapor ettiklerini ortaya koydu Ayrıca yapılan analizler, kadınların toplum, kurumlar ve aile üyeleri tarafından cinsiyet ayrımcılığına erkeklere oranla daha fazla maruz kaldığını göstermiştir.

Tablo 7 ise, KTÖ-K'nun maddelerini sıklık parametresi açısından göstermektedir. Tüm örneklemde en sık yaşanılan olay yakın birinin ani ölümü (M = 1.59, SD = 1.39) iken; kadınlarda en sık karşılaşılan olay doğal afet (M = 1.56, SD = 1.34) ve erkeklerde yakın birinin ani kaybıdır (M = 1.64, SD = 1.45).

## 3.2. Kümülatif Travma Ölçeği-Kısa Form'un Güvenirlik ve Geçerlik Analizleri

KTÖ-K'nun maddelerinin ve alt ölçeklerinin tutarlılığını incelemek için faktör analizi, değerlendiriciler arası güvenirlik analizi ve iç tutarlılık güvenilirlik analizleri yapılmıştır. Daha sonra, KTÖ-K'nun eşzamanlı geçerliği ve ıraksak geçerliği analiz edilmiştir.

### 3.2.1. Faktör Analizi

Kümülatif travma durumunda, bir olayın yaşanmasının diğer olayın deneyimine neden olmasını beklemek zordur. İlgili literatür benzer ölçekler için faktör analizi yapılmasını önermemektedir (Hooper, Stockton, Krupnick ve Green, 2011). Bununla birlikte, orijinal çalışmada açımlayıcı faktör analizi sunulduğundan, mevcut çalışma uyarlanmış ölçeğin faktör yapısını da incelemek istemiştir. Faktör analizi, 5 faktörlü bir yapı ortaya koymuştur. Fakat, faktör yapısı matrisine göre, faktörlerin altında yüklenen maddelerin bir kısmının içerik bakımından ilişkili olmadığı ve bazı maddelerin hiçbir kategoriye yüklenmediği tespit edilmiştir.

### 3.2.2. Değerlendiriciler Arası Güvenirlik Analizi

Güvenirlik amacıyla, travma konusunda dört uzmana 5 alt ölçek tanımlanmış ve ölçek maddelerini uygun kategorilere yerleştirmeleri istenmiştir (Ek H). Analiz, KTÖ-K'daki tüm alt ölçekler için dört puanlayıcı arasındaki uzlaşma yüzdesinin %45.7 ile %82.9 arasında değiştiğini göstermiştir. Cohen'in kappa istatistikleri ise puanlayıcılar arasındaki uzlaşmanın istatistiksel olarak anlamlı olduğunu göstermiştir ($\kappa = [0.33, 0.77]$). Ayrıca, Fleiss'in Kappa istatistikleri, alt ölçekler için .42 ile .59 arasında değişmektedir.

Analize göre, toplam 18 madde orijinal çalışmadaki yerlerine konulmuştur. Değerlendiricilerin kararının, bazı maddeler için ikincil travma kategorisi bulunmadığından ve Türk kültürü bağlamı göz önüne alındığından ölçeğin sahibinin düşüncesine paralel olmadığı da bulunmuştur. Değerlendiricilerin kararsızlığından dolayı sınıflandırılmamış maddeler, mevcut çalışmanın araştırmacısı tarafından kategorilere atanmışlardır. Orijinal çalışmada sınıflandırılmamış maddeler ise değerlendiricilerden tarafından kategorilere yerleştirilmiştir. Sonuçta, Ölüm-Kalım (Doğal Yollarla Oluşan) ve Ölüm-Kalım (İnsan Eliyle Oluşan) Travmaları birleştirilmiş; dört faktörlü yapı kabul edilmiştir. Ayrıca, kategorilerin ortalama olumlu ve olumsuz değerlendirme puanları hesaplandığında, en düşük olumsuz değerlendirme puanının Aile-Bağlanma Travmaları için olduğu tespit edilmiştir.

### 3.2.3. İç Güvenirlik Analizi

Ölçeğin Türkçe versiyonunda, KTÖ-K Negatif puanı açısından Cronbach'ın alfa katsayısı erkekler için .75, kadınlar için .74 ve tüm örneklem için .74 olarak hesaplanmıştır; fakat, KTÖ-K Pozitif puanı açısından Cronbach alfa anlamlı aralıkta bulunmamıştır. Ayrıca, travma alanında uzman değerlendiriciler tarafından belirlenen kategoriler için, KTÖ-K Negatif ve KTÖ-K Pozitif puanları açısından güvenirlik analizi yapılmıştır. Ancak, hesaplanan Cronbach'ın alfa katsayısı dört alt ölçeğin istatistiksel olarak güvenilir olmadığını göstermiştir.

### 3.2.4. Eşzamanlı Geçerlik

Beklendiği gibi, KTÖ-K Negatif ile Olayın Etkisi Ölçeği ($r = .22$, $p < .001$), KTÖ-K Negatif ile yeniden yaşama ($r = .26$, $p < .001$) ve KTÖ-K Negatif ve artmış

uyarılmışlık alt boyut ($r$ = .24, $p$ < .001) arasında anlamlı pozitif bir korelasyon bulunmuştur. Ancak, KTÖ-K Negatif ile kaçınma alt ölçeği arasındaki ilişki anlamlı bulunmamıştır ($r$ = .09, $p$ = .10). Ayrıca, KTÖ-K Negatif toplam puanı ile TSBE toplam puanı arasındaki ilişki anlamlı bulunmuştur ($r$ = .24, $p$ < .001). Benzer şekilde, KTÖ-K Negatif puanı ile kişilerarası ilişkilerde değişimler ($r$ = .15, $p$ < .01), hayat görüşü sistemindeki gelişim ($r$ = .21, $p$ < .001) ve kendini algılama alt boyutuyla ($r$ = .26, $p$ < .001) anlamlı pozitif korelasyon bulunmuştur. Bununla birlikte, KTÖ-K Pozitif ile IES-R ve TSBE arasında bir ilişki olmadığı görülmüştür.

#### 3.3.5. Iraksak Geçerlik

Ölçeğin ıraksak geçerliğini incelemek için bileşik puanlar ile SASS ve GSE arasında korelasyon analizi yapılmıştır. Analiz, KTÖ-K Negatif ile sosyal adaptasyon puanı ($r$ = -.02, $p$ = .72) ve KTÖ-K Pozitif ile sosyal uyum puanları arasındaki ilişkinin ($r$ = -.07, $p$ = .17) anlamlı olmadığını göstermiştir. Ayrıca, beklendiği gibi, KTÖ-K Negatif ($r$ = .02, $p$ = .67) ve KTÖ-K Pozitif ($r$ = .05, $p$ = .30) puanlarının öz yeterlilik puanları ile anlamlı bir korelasyon göstermediği bulunmuştur.

## 4. TARTIŞMA

### 4.1. Travmatik Olay ve Cinsiyetle İlişkisi

Önceki araştırmalar, bireylerin yaşamları boyunca karşılaştıkları ortalama travmatik olay sayısını 2.22 ile 5.1 (Benjet ve ark., 2016; de Vries ve Olff, 2009; Karanci ve ark., 2012) arasında bildirirken; mevcut çalışma bulguları, karşılaşan travmatik olayların ortalama 6.64 olduğunu göstermiştir. Tutarsız bulguların KTÖ-K'nun uyarlanmış versiyonundaki madde sayısının travma literatüründe kullanılan ölçeklerin madde sayısından daha fazla ve çeşitli olması ile alakalı olabileceği düşünülmektedir. Mevcut çalışmanın sonuçları, erkekler ve kadınlar arasında travma yaşantısı konusunda hafif bir fark olduğunu gösterse de, iki cinsiyet arasında istatistiksel olarak anlamlı bir fark bulunmamıştır. Bu bulgu, literatürle de uyumludur (Salazar, Keller, Gowen ve Courtney, 2012). Çelişkili sonuçların arkasındaki neden kültür tarafından açıklanabilir.

Çalışmanın en çok bildirilen travmatik olay bulguları da Türk literatürüyle benzerlik göstermektedir (Arıkan ve Karancı, 2012; Gül, 2014; Karancı ve ark., 2012). Hangi travmatik olayların daha sık yaşandığını gösteren sonuçlar, hangi olayların en çok bildirildiği ile benzerlik göstermektedir. Cinsel istismar travmalarının en az ve az sıklıkta olduğu bildirilmiştir. Literatür, cinsel travmaların rapor edilmesinin nedenlerinin olumsuz değerlendirilmeden korkulması (Ahrens, 2006) ve özbildirim ölçeklerindeki madde ifadeleri (Abbey, Parkhill ve Koss, 2005) olabileceğini göstermektedir.

Bu çalışmanın sonuçlarına göre, kadınlar ve erkekler tarafından bildirilen travmatik olay türlerinde bazı farklılıklar vardı. Günlük güçlüklerden kaynaklanan sinir krizi, daha önce travma ölçeklerinde yer almamaktadır ancak kadınlarda en çok bildirilen travmatik deneyimlerden birisi olmuştur. Günlük sıkıntılar, literatürde depresyon ve TSSB gibi tıbbi durumlarla ilişkili olarak kabul edilmektedir (Cooper, Guthrie, Brown ve Metzger, 2011). Kültürel normlar ve modern dünya, kadınların birçok farklı alanlarda başarılı olması gerektiğini vurguladığından, bu durum özellikle kadınlar üzerinde fazla baskı yaratıyor ve birikimsel günlük streslerin temelinde yer alıyor olabilir.

Ayrıca, çalışma bulguları, bireyin fiziksel bütünlüğüne yönelik tehditleri içeren olayların, kadınlardan daha çok erkek tarafından yaşandığını göstermiştir. Tolin ve Foa (2016) tarafından hazırlanan meta-analitik bir inceleme bu bulguyu desteklemektedir. Bu bulgu, erkeklerin sözlü saldırılardan ziyade olumsuz duygularını fiziksel eylemlerle gösterme eğilimine olmalarına dayanıyor olabilir (Booman, 2003). Ek olarak, kadınların toplum ve aile üyeri tarafından cinsiyete göre ayrımcılığa uğramasında daha fazla deneyim yaşadıkları görülmüştür. Cinsiyet normları ve toplumsal cinsiyet rollerine dayanan bu sonucun nedeni, Türk kültüründe kadınların çoğunlukla annelik ile tanımlanması ve iş hayatında yetersiz olarak kabul edilerek ayrımcılığa uğramalarıdır (Pavalko, Mossakowski ve Hamilton, 2003; Sakallı-Uğurlu ve Beydoğan, 2002).

Son olarak, erkeklerin örneklemdeki kadınlara göre KTÖ-K Pozitif'te daha yüksek puan aldıkları ve erkeklerin yaşadıkları travmatik olayları için kadınlara kıyasla daha olumlu etkiler rapor ettikleri gösterilmiştir. Bu sonucun ardındaki olası

bir açıklama, erkeklerin travmalarla ilgili olumsuz deneyimleri görmezden gelip reddetmeleri ve farklı stratejiler kullanarak baş edebilmeleri olabilir (Hourani, Williams, Bray ve Kandel, 2015).

### 4.2. Kümülatif Travma Ölçeği-Kısa Form'un Psikometrik Özellikleri

Travma literatüründeki benzer ölçekler için kavramsal olarak bir olay türünün deneyimlenmesinin, başka belirli olayların yaşanmasına neden olamayacağının belirtilmesinden ötürü, faktör analizinin kullanılması desteklenmemektedir (Carr, Hardy ve Fornells-Ambrojo, 2018). Mevcut çalışmada da, KMO değerinin ideal olarak yeterli olmadığının görülmesi (Field, 2000) ve oluşan faktörlerin maddelerinin anlamlı gruplanmaması nedenleriyle, açımlayıcı ve doğrulayıcı faktör analizi dahil edilmemiştir.

Değerlendiriciler arası güvenirlik analizinde, maddelerin neredeyse yarısı orijinal çalışmada belirtilen kategorilerde yer almışlardır. Alt ölçekler orijinal çalışma ile tamamen aynı olmadığı ve bu maddelerin kültürel çağrışımları farklı olduğu için, puanlayıcılar tarafından orijinal yerlerine yerleştirilmeyen bazı maddeler de vardır. Uzmanlar arasında uzlaşmalar olsa bile, değerlendiriciler maddeleri tek bir kategoriye yerleştirirken zorluk yaşadıklarını ifade etmişlerdir. Bu durum, Kira (2001) travma taksonomisinde travmatik olayların birbirini dışlamadığını ve kavramsal ve deneysel olarak iç içe olabileceğini öne sürdüğü için beklenen bir sonuçtur. Bulgularda, puanlayıcılar tarafından oluşturulan alt ölçeklerin ortalama değerlendirme puanları da sunulmuştur. Ortalama olarak, çoğunlukla olumsuz değerlendirilen maddelerin Aile-Bağlanma Travması kategorisinde olduğu görülmüştür. Türk kültürü "ilişki kültürü" olarak tanımlanmaktadır (Kağıtçıbaşı, 1985). Aile içindeki duygusal bağlar ve güçlü özdeşleşleşmeler nedeniyle, aile bağlantılı travmalar daha olumsuz deneyimler olarak tecrübe edilebilir.

Her ne kadar Cronbach'ın alfa katsayısı literatürdeki benzer travma ölçekleri için değerlendirilmiş bir istatistik olmasa da (Higgs, 2017; Wilker ve ark., 2015) iç tutarlılık analiz sonucunda, KTÖ-K'nun uyarlanmış versiyonunun, sadece KTÖ-K Negatif puanı için güvenilir bir ölçek olduğu bulunmuştur. Ancak, KTÖ-K Pozitif puanı için ölçeğin güvenirliği desteklenmemiştir. Travmatik olayların etkileri

bireyler tarafından sıklıkla olumsuz olarak değerlendirildiği için olumlu değerlendirme açısından tutarlılık olmadığı tahmin edilmektedir. Güvenilirlik analizlerinin bulgularına dayanarak, tek faktörlü bir yapı ve KTÖ-K Negatif kullanmanın daha avantajlı olacağı düşünülmektedir.

Son olarak, KTÖ-K'nun uyarlanmış versiyonunun geçerliğini araştırmak için yapılan analizler beklenen sonuçlar ortaya koymuştur. Eşzamanlı geçerlik açısından, anlamlı görülmeyen tek korelasyon, KTÖ-K Negatif ile IES-R'nin kaçınma alt ölçeği arasındaki ilişkidir. Bu bulgu, travmatik deneyimlerin paylaşılmasının Türk kültüründe yaygın bir uygulama olmasına ve dini inançlara (Pargament, 2001) dayanıyor olabilir. Eş zamanlı geçerlik için yürütülen korelasyon analizi, istatistiksel olarak anlamlı ancak düşük Pearson r değerlerine işaret etmiştir. Literatürde, kümülatif travma skorları ile diğer kavramlar arasındaki ilişkide küçük ama anlamlı bağlantılar gözlenmiştir (Millender ve Lowe, 2017; Nael, 2012). Diğer nedenler ise, aralık kısıtlılığı sorunu, örneklem seçimi ve örneklem büyüklüğü olailir. Iraksak geçerlik için yürütülen korelasyon analizlerinden elde edilen bulgular ise KTÖ-K Negatif ve KTÖ-K Pozitif puanlarının, ıraksak geçerlik ölçeklerinden farklı bir kavramı ölçtüğünü göstermiştir.

### 4.3. Çalışmanın Katkıları

Bu çalışmada, KTÖ-K travma araştırmaları ve klinik uygulama alanı için yeni, geçerli ve güvenilir bir değerlendirme aracı olarak sunulmuştur. Travma türü açısından, KTÖ-K travma literatüründeki mevcut ölçeklerden daha zengindir ve çok çeşitli travmatik deneyimler içermektedir. İnsanların deneyimledikleri travmatik bir olayın sürekliliğini de araştıran bu ölçek, travmaların etkilerini araştırırken önemli bir belirleyici olabilir. Ayrıca, travmatik deneyim yaşını araştırmak, bireyin travma geçmişinin gelişimsel bir haritasını çıkarmaya yardımcı olabileceğinden araştırmacılara yeni bir bakış açısı getirebilir. Son olarak, KTÖ-K'nun değerlendirme alt boyutunun varlığı, tedavi programlarının ve farklı müdahale stratejilerinin etkinliğini değerlendirmeyi sağlayabilir.

### 4.4. Çalışmanın Güçlü Yönleri ve Kısıtlılıkları

Bu araştırmanın güçlü yönlerinden birisi örneklem büyüklüğüdür çünkü literatürdeki uyarlama çalışmaları için önerilenden daha büyük olan 384 katılımcı ile gerçekleştirilmiştir. Ayrıca, çalışmada kadınlar ve erkekler arasındaki cinsiyet oranının neredeyse eşit olması, cinsiyetler arası karşılaştırmaya olanak sağlamıştır. Mevcut araştırmanın diğer gücü ise, çalışma örnekleminin heterojenliğidir.

Çalışmanın bazı kısıtlılıkları da vardır. Bu çalışma, KTÖ-K'nun güvenirlik testinin bir parçası olarak test-tekrar test prosedürünü katılımcıların anonimliği ve süre sınırlaması nedeniyle içermemiştir. İkincisi, bu çalışmadaki katılımcıların neredeyse hepsi birden fazla travma deneyimi yaşamasına rağmen, çoklu travmatik olaylara maruz kalan bireyler için özel olarak araştırılmamıştır. Bu, kartopu örneklemesi yönteminden kaynaklanmış olabilir. Benzer şekilde, aşırı puanlar gözlemlenmediğinden, örnekleme yöntemi soruna yol açmış olabilir.

### 4.5. Gelecekteki Araştırmalar İçin Öneriler

Bu araştırmadaki örneklem literatürde önerilenden daha fazla katılımcı içermesine rağmen, bulguların temsil edilebilirliğini arttırmak için daha büyük örneklemler kullanılarak çalışmalar yapılabilir. Gelecekteki çalışmalar, mevcut araştırmanın bulgularını genel popülasyonun tüm kesimlerini temsil eden daha geniş bir örneklemle yinelemeyi hedeflemelilerdir. Ayrıca, azınlık gruplarıyla da (örn., etnik ve dini azınlıklar) araştırma yapılması değerli sonuçlar doğurabilir. Gelecekteki araştırmalarda, belirli yaş gruplarında hangi travmaların daha sık yaşandığı incelenebilir. Ölçeğin güvenirliğini desteklemek için test-tekrar test güvenirlik katsayısının kontrol edildiği gelecekteki çalışmalara ihtiyaç vardır. Son olarak, gelecekteki çalışmalar, orijinal ölçekte belirtilmeyen bazı travmatik deneyimleri (örn. okul zorbalığını, ekonomik krizler) eklemeyi düşünebilirler.

### 4.6. Sonuç

Sonuç olarak, bu çalışmada, KTÖ-K’nun uyarlanmış versiyonunun travma araştırması için geçerli ve güvenilir bir ölçüm olduğu tespit edilmiştir. Çalışma kapsamında Türk örneklemindeki travmatik olayların türü, maruz kalma sıklığı ve deneyim değerlendirmesi yapılmıştır. Bu alanlardaki cinsiyetler arasındaki

farklılıklar da vurgulanmıştır. Bu çalışmada belirtilen benzer demografik ve psikometrik bulgular igili literatür ve ölçeğin orijinal çalışmasıyla karşılaştırıldığında, KTÖ-K'nun uyarlanmış versiyonunun Türk travma literatüründe de kullanılabilirliği vurgulanmaktadır.

## APPENDIX K. TEZ İZİN FORMU / THESIS PERMISSION FORM

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**Deniz Bilimleri Enstitüsü** / Graduate School of Marine Sciences ☐

**YAZARIN /** AUTHOR
**Soyadı** / Surname : Eltan
**Adı** / Name : Selen
**Bölümü** / Department : Psikoloji

**TEZİN ADI /** TITLE OF THE THESIS (**İngilizce** / English) :
Psychometric Properties of the Cumulative Trauma Scale: Evaluation of the Validity and Reliability in a Turkish Sample

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

1. **Tezin tamamı dünya çapında erişime açılacaktır. /** Release the entire work immediately for access worldwide. ■

2. **Tez iki yıl süreyle erişime kapalı olacaktır.** / Secure the entire work for patent and/or proprietary purposes for a period of **two years. *** ☐

3. **Tez altı ay süreyle erişime kapalı olacaktır.** / Secure the entire work for period of **six months**. ***** ☐

***** *Enstitü Yönetim Kurulu kararının basılı kopyası tezle birlikte kütüphaneye teslim edilecektir.*
*A copy of the decision of the Institute Administrative Committee will be delivered to the library together with the printed thesis.*

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