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ENHANCING FEATURES AND PSYCHOLOGICAL RESILIENCE
ON TRAUMATIC STRESS

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ÖZET

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Psikolojik dayanıklılık kavramı kısaca, stres verici olaylardan sonra adaptif tepkiler verebilme becerisi olarak tanımlanmaktadır (Parsons et al., 2016); mental sağlığı koruyucu ve iyi-oluşu arttırıcıdır (Srivastava, 2011). Psikolojik dayanıklılık, travmatik olaylara karşı baş etme becerisini artıran bir faktör olarak ele alındığında çeşitli kişisel ve psikolojik bileşenler ile ilişkili bir sistemi oluşturmaktadır. Bu çalışmanın amacı; duygu düzenleme, bilişsel esneklik, öz-düzenleme ve öz-şefkat bileşenlerinin psikolojik dayanıklılık üzerindeki yordayıcılığını ve psikolojik dayanıklılığın travmatik stresi yordayıcılığını incelemektedir. Bu amaca yönelik, psikolojik dayanıklılığı güçlendirici bileşenleri, psikolojik dayanıklılığı ve travmatik stresi içeren iki adet model test edilmiştir. Çalışma kapsamında, en az bir travmatik deneyimi olan 266 gönüllü katılımcıya ulaşılmıştır. Mevcut çalışmanın demografik değişkenleri incelendiğinde travma türüne, özelliklerine ve zamanına göre travmatik stresin farklılaştığı bulgulanmıştır. Travma türleri arasında karşılaştırma yapıldığında, insan eli ile olan travma hayatta kalanlarının kümülatif travma hayatta kalanlarına oranla daha düşük psikolojik dayanıklılık gösterdiği bulgulanmıştır. Travma özelliklerine göre travmatik stres incelendiğinde ise, başkasının hayati tehlikesinin, çaresizlik ve korku hislerinin olduğu travmalarda katılımcılar daha yüksek travmatik stres göstermiştir. Yaşadıkları travma son üç sene içerisinde gerçekleşen katılımcılar daha yüksek travmatik stres göstermiştir. Araştırma değişkenleri arasında orta düzeyde anlamlı korelasyonlar bulunmuştur. Araştırmanın ana hipotezini test eden modeller sonucu; duygu düzenleme, bilişsel esneklik, öz-yeterlik ve öz-şefkat bileşenlerinin psikolojik dayanıklılığı yordadığı bulgulanmıştır. Psikolojik dayanıklılık, güçlendirici bileşenleri ile birlikte travmatik stresi yordamaktadır, ancak güçlendirici bileşenlerin travmatik stres üzerinde direkt etkisinin gözlemlendiği modelde psikolojik dayanıklılık anlamlı bir şekilde travmatik stresi yordamamaktadır. Bulgular, psikolojik dayanıklılığın diğer güçlendirici bileşenlerin etkisi ile birlikte bir yordayıcılığı olduğunu, güçlendirici bileşenlerinin etkisi olmadan travmatik stresi yordamadığını göstermiştir.

Anahtar Kelimeler: psikolojik dayanıklılık, psikolojik dayanıklılığın yordayıcıları, travmatik stres

ABSTRACT

Kök, Büşra. The Predictive Roles Of Psychological Resilience Enhancing Features and Psychological Resilience on Traumatic Stress. Başkent University, Institute of Social Sciences, Clinical Psychology Master's Program with Thesis, Ankara, 2024.

The concept of psychological resilience is briefly defined as the ability to respond adaptively after stressful events (Parsons et al., 2016); it is protective of mental health and enhances well-being (Srivastava, 2011). When psychological resilience is considered as a factor that increases the ability to cope with traumatic events, it constitutes a system related to various personal and psychological components. The current study aims to examine emotion regulation, cognitive flexibility, self-efficacy, and self-compassion as resilience-enhancing features and their prediction of resilience, as well as whether resilience will result in the prediction of traumatic stress. For this purpose, two models, including psychological resilience, features that strengthen psychological resilience, and traumatic stress, were tested. Within the scope of the study, 266 volunteer participants with at least one traumatic experience were reached. When the demographic variables of the current study were analyzed, it was found that traumatic stress differed according to the type, qualities, and time of trauma. When a comparison was made between trauma types, it was found that survivors of human-made trauma showed lower psychological resilience than survivors of cumulative trauma. When traumatic stress was analyzed according to trauma characteristics, participants showed higher traumatic stress in traumas where there was a threat to someone else's life, feelings of hopelessness, and horror. Participants whose trauma occurred within the last three years showed higher traumatic stress. Moderately significant correlations were found between the research variables. As a result of the models testing the main hypothesis of the study, emotion regulation, cognitive flexibility, self-efficacy, and self-compassion features were found to predict psychological resilience. Psychological resilience predicts traumatic stress together with its empowering features, but psychological resilience does not significantly predict traumatic stress in the model where the direct effect of empowering features on traumatic stress is observed. Results showed that psychological resilience predicted traumatic stress with the effect of other empowerment features but not without the effect of empowerment features.

Keywords: psychological resilience, predictors of psychological resilience, traumatic stress

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1. INTRODUCTION

Enabling one to cope with the stresses of life has many related factors. One of them is psychological resilience, which can be described as the ability to give appropriate or adaptive responses during stressful events or adversity (Parsons et al., 2016). Resilience is positively related to maintaining mental health and well-being (Srivastava, 2011). Although the concept of mental health was once defined as the absence of mental disorders, the concept of health does not only refer to the absence of disease (Wren-Lewis and Alexandrova, 2021). World Health Organization's (2022) definition of mental health is "a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community.". Mental health is crucial to one's overall well-being (McDaid and Park, 2011).

In addition to maintaining and protecting mental health, resilience is a protective factor against mental disorders (Shrivastava and Desousa, 2016). The main protective factors against developing psychopathology have been summarized in 3 main factors by Fribog (2005, p. 6), "(1) Positive dispositional and temperamental attributes, such as ego-strength and emotional stability, positive self-esteem, internal locus of control, good problem-solving abilities, and good social and communicational skills, (2) a family climate characterized by cohesion, loyalty, support, and a trusting relationship with at least one of the family members, and (3) the presence of some kind of external support, providing both practical and emotional support, either from teachers, friends, coaches, counselors, colleagues, or health institutions that may reinforce functional ways of coping with problems, and to regulate and to reduce negative mood". These protective factors combine certain personality traits and environmental factors that protect individuals from psychopathology and promote mental health and well-being.

Psychological resilience is considered as a factor that increases the ability to cope with traumatic events. It constitutes a system related to various personal and psychological features. Emotion regulation is one of them; it has a positive relationship with resilience and a negative relationship with perceived stress and traumatic stress (Carroll, 2020). Cognitive flexibility is mentioned as another feature, and when looking at models of psychological resilience (Parsons et al., 2016; Yao and Hsieh, 2019), cognitive flexibility plays an essential role in giving adaptive responses after trauma or stress by changing or deciding the appropriate responses to a stimulus. In addition to these features, self-efficacy and self-compassion are other factors that are important for positive outcomes in the face of stress or

trauma. Self-efficacy and self-compassion are related to building resilience and reducing traumatic stress (Souza and Hutz, 2016). Elevated self-efficacy was shown to enhance resilience by acting as a buffer against stress, highlighting its crucial role in managing challenges (Schueler et al., 2021). Self-compassion and the concept of psychological capital, which refers to hope, resilience, self-efficacy, and optimism, were found to play a protective role against psychopathology (Salehi and Rabiee, 2020).

When psychological resilience is considered as a factor that increases the ability to cope with traumatic events, it constitutes a system related to various personal and psychological components. In this framework, the relationship between features that enhance psychological resilience and traumatic stress is an important research topic. This thesis aims to examine emotion regulation, cognitive flexibility, self-efficacy, and self-compassion as resilience-enhancing features and their prediction of resilience, as well as whether resilience leads to the prediction of traumatic stress. The remainder of this chapter presents theoretical explanations and findings related to the purpose of this study. First, the definitions of psychological trauma and traumatic stress are provided. Then, the concepts of psychological resilience, emotion regulation, cognitive flexibility, self-efficacy, and self-compassion will be explained. The concepts will be discussed in terms of their importance to the research and their features concerning the purpose of the study; then, the research hypotheses and conceptual diagram for the proposed study model will be presented.

1.1. Psychological Trauma and Traumatic Stress

According to DSM-5-TR, trauma is defined as “actual or threatened death, serious injury, or sexual violence” (American Psychiatric Association, 2022, p.302). Trauma should include one or more of the following: directly experienced by adults, adolescents, and children over the age of six, directly observing an event that has happened to others, learning about an event that has happened to significant others (must include the possibility of actual death), being repeatedly exposed to traumatic experiences. This definition includes actual or threatened death, serious injury, and sexual violence. However, extremely negative, uncontrollable, and sudden life events are also considered traumatizing, which can result in “depression, aggression, substance abuse, physical illnesses, low self-esteem, identity confusion, difficulties in interpersonal relationships, and guilt and shame” (Carlson ve Dalenberg, 2000). The current study will cover trauma and traumatic experiences, which can also mean stressful life events and adversities.

Based on Lazarus and Folkman's (1984) definition of stress, stress can be defined as the experience of tension and discomfort due to feelings of inadequacy and the perception of internal and external demands as potentially harmful (Yelpaze, 2020). As with the definition of stress, the degree to which and in what situations individuals experience stress is highly subjective, but personality traits such as cognitive rigidity can increase perceived stress (Çakır, 2022). Positive or protective factors for better coping with stress can be summarized as “optimism, hope, self-efficacy, self-compassion, mindfulness, gratitude, and forgiveness” (Yelpaze, 2020, p. 336).

Traumatic stress occurs after a traumatic event, and it encompasses a broad spectrum of psychoemotional responses (Roberts, 2010). These responses may vary, but most common physiological responses are related to arteriovascular, respiratory, muscular, and nervous system problems (Solomon and Heide, 2005). These nervous system problems include changes in the brain structure that can cause memory, learning, emotion regulation, and social and moral development functioning problems. Traumatic stress also disrupts the stable internal environment (homeostasis) (Solomon and Heide, 2005). Allostasis means the adaptation to maintain homeostasis after the traumatic experiences, which can be crucial for survival. However, if the body and brain can not adapt to the changes, high levels of allostatic load can occur, which means the cumulative physiological and psychological burden from stress (McEwen, 2005). According to Carlson et al. (2016), pre-trauma risk factors involve demographics such as gender, ethnicity, education, and socioeconomic status.

Traumatic experiences that cause extreme stress can result in a healthy recovery process with resilient responses, or allostatic load can occur with vulnerable responses and can lead to stress-related psychopathologies (Charney, 2004). Owen et al. (2009) suggest that traumatic events can shatter the individual's core beliefs about self and life. If one can not cognitively restructure their own cognitive beliefs to establish meaning in life, this may result in post-traumatic stress disorder (PTSD). Traumatic stress is also related to psychopathologies like anxiety and depression (e.g., Isobel et al., 2017; Radell et al., 2020; Tunç, 2021).

According to the Substance Abuse and Mental Health Services Administration (2014), trauma has seven types; “adverse childhood experiences, disasters/mass trauma, domestic violence/intimate partner violence, political violence/torture, sexual assault/rape, combat trauma, historical trauma, and cumulative trauma.” According to Koenen et al. (2008, p. 462), the trauma types that individuals experience are; “sudden unexpected death

by trauma of a close family member or friend; personal assault or victimization; serious accidents; hearing about or witnessing a close friend or relative experiencing an assault, serious accident, or serious injury; personal illness; natural disaster”. As mentioned, there are several classifications in the trauma literature, but the most suitable classifications for this study were found to be human-made disasters and natural disasters (Bromet et al., 2018). Human-made traumas include intentional and accidental disasters, such as fires, explosions, wars, and natural disasters, including catastrophic events stemming from natural causes, such as earthquakes and tsunamis (Mohamed, 2007). Human-made traumas, when they are created deliberately, have devastating effects on trauma survivors (Ayhan and Kolburan, 2023), and they were found to be more related to PTSD than natural disasters (Bromet et al., 2018).

1.2. Psychological Resilience

Psychological resilience refers to maintaining or regaining psychological well-being despite adversities or diverse experiences (Wald et al., 2006). As the fields of study and classifications have diversified over time, this concept has also become more diverse. Utilizing a neurobiological perspective, the most comprehensive definition states that psychological resilience is “the capacity and dynamic process of adaptively overcoming stress and difficulties while maintaining normal psychological and physical functioning” (Wu et al., 2013, p. 1).

According to Wu et al.’s (2013) literature review, the etiology of psychological resilience has been explained in terms of genetic, epigenetic, developmental, psychological, neurochemical, and neural circuit factors. A complex interplay exists between these factors; for instance, genetic and epigenetic influences interact inextricably, shaping the neurochemical landscape and receptor profiles that underpin adaptive responses. Therefore, understanding these etiological backgrounds is crucial for the prevention and treatment of stress-related psychopathologies; for instance, medication targeting neurochemical systems involving CRH and the HPA axis can be used in the treatment of depression and anxiety. The Corticotropin-Releasing Hormone (CRH) can be described as the alarm bell of the stress response; in times of treatment, the CRH increases and triggers the release of the cortisol hormone as known as the body’s stress response, which plays a central role in regulating the stress response (Kageyama et al., 2021). The HPA (Hypothalamic-Pituitary-Adrenal) axis can be described as the conductor of the stress response. The HPA axis plays a complex role in stimulating the adrenal glands to release the cortisol hormone and modulating this cascade

for a balanced state (Gillespie et al., 2009). Even though understanding the roles of these systems is essential, the brain's stress response involves countless other neurochemical players working.

In compliance with Wu et al. (2003), Brown and Westaway (2011) have also suggested that biological, psychological, genetic, environmental, or socioeconomic factors contribute to or deteriorate resilience. Environmental factors associated with resilience can be summarized as “parenting quality: warmth, structure, and monitoring; close relationships with competent adults: parents, relatives, and mentors; connections to prosocial and rule-abiding peers (among older children); good schools; connections to prosocial organizations (such as clubs or religious groups); neighborhood quality: public safety, collective supervision, libraries, recreation centers; quality of social services and health care” (Brown and Westaway, 2011, p. 327). These factors, present throughout one's life, can positively impact resilience when experienced in childhood, along with other developmental factors. Developmental factors associated with resilience can be summarized as the number and intensity of the adversities experienced, exposed parenting style, attachment style, one's intelligence, self-regulation, self-efficacy, and intrinsic motivation (Masten, 2001). Graber et al. (2015) state that having a supportive and loving relationship with a parental figure is the most potent resilience contributor in childhood and adolescence.

Psychological factors contributing to resilience include cognitive processes, personality traits, and active coping mechanisms. Psychosocial characteristics contributing to psychological resilience include “realistic optimism, active coping and high coping self-efficacy, high cognitive functionality and autonomy, playfulness, motivation, positive risk-taking, strong cognitive reappraisal and emotion regulation, secure attachment, trust, strong social skills and social network, self-confidence, positive identity, religious belief that gives the meaning of life, humor, positive thinking, altruism, generosity” (Wu et al., 2013, p. 5). Following these resilience relationships, specific internal or external factors, termed protective mechanisms, bolster our capacity for adaptive functioning (Graber et al., 2015). For instance, having a protective family environment, social support, and coping skills; coping skills enhancing emotion regulation processes like reappraising a situation more positively, which can require cognitive flexibility; being optimistic, self-efficient, and having hope and hardiness; income stability and availability.

1.2.1. Models and explanations of resilience

According to Maltby et al. (2015), studies have tended to operationalize psychological resilience with (1) a buffering approach or (2) a trait approach. The buffering approach, also known as the buffering hypothesis, considers resilience and risk as a bipolar dimension, as resilience and its protective factors are moderators of the impact of the stress or traumatic experiences on an outcome (Johnson et al., 2011). Resilience, in a separate bipolar dimension to risk of an outcome from adversity, buffers for reducing the impact of the risk on the person. This approach highlights the role of protective factors, which can be psychological traits encompassing resilience, in moderating the relationship between adversity and its outcomes. In other words, resilience acts as a buffer, reducing the negative impact of traumatic experiences and promoting more positive coping and adaptation. In comparison, trait resilience means how people generally approach and respond to adversity, including their ability to reduce the impact of adversity or recover from it (Beutel et al., 2017).

1.2.1.1. Cognitive model of psychological resilience

The Cognitive Model of Psychological Resilience is a preliminary framework that Parsons et al. (2016) developed. According to this model, resilience is the ability to give adaptive responses to adversity. Authors argue that this adaptive/appropriate or inappropriate response depends on complex cognitive processes. This model focuses on cognitive processes like flexibility, adaptability, and accurate information processing to apply appropriate cognitive processes in adversity. This model has active cognitions, information processing bias at the center, and executive control as their moderator. This dynamic results in giving an appropriate or inappropriate response to the situation/adversity, and flexibility in cognitive systems plays a crucial role in giving appropriate, resilient responses. Then, this response is evaluated through feedback that looks to the mapping system, which evaluates the situation and whether it is adaptive to specific circumstances. This model lays the groundwork for a solid theoretical framework for positive mental health and resilience studies within an information-processing framework. Moreover, resilience is considered a dynamic process rather than a fixed trait (Parsons et al., 2016).

1.2.1.2. Cognitive appraisal of resilience (CAR) model

Cognitive Appraisal of Resilience Model developed by Yao and Hsieh (2019). According to this model, cognitive flexibility moderates well-adjusting to adversity by shifting attention between cognition-emotion regulation and pain perception. This model notes resilience as a dynamic developmental process that genetics, life experiences, and coping skills can influence rather than being a fixed trait. Emotion regulation and cognitive control are highlighted as significant key factors in one's resilience in this model (Shi et al., 2022). According to this model, how individuals appraise negative experiences – their cognitive appraisal – can determine their adaptability to future events. Positive cognitive appraisals can protect against stress, promoting resilience (Kalisch, 2015).

The literature's models of psychological resilience were found to be limiting; psychological resilience may vary in response to different risk factors; therefore, it is recommended that more detailed and comprehensive studies be conducted (Davydov, 2010).

1.3. Emotion Regulation

Emotion has a variety of definitions, and it defies an easy definition across disciplines. Sander (2013) suggests that the elements of emotion include action tendencies, bodily reactions, feelings, and cognitive processes. According to the modal model of emotion, emotion is defined as “emotions involve person-situation transactions that compel attention, have meaning to an individual in light of currently active goals, and give rise to coordinated yet flexible multisystem responses that modify the ongoing person-situation transaction in crucial ways.” (Gross, 2014, p. 5). In line with the definition, the evolutionary explanation suggests that emotions' core function is adapting to situations adaptively (Nesse, 1990).

Following Thompson's (1994) definition and similar concepts presented by Einserberg and Morris (2002), emotion regulation encompasses the skillful management of our emotions to achieve a state of adaptability and functionality. This multifaceted process involves a range of internal and external mechanisms, including attending to, interpreting, appraising, and expressing our emotions effectively. Emotion regulation can also be conceptualized as a strategy for managing our emotional landscape, particularly in the face of negative emotions such as anxiety and anger, to mitigate their potential for maladaptive behavioral outcomes.

In the first few years of life, children begin to show behaviors related to emotions, such as self-soothing strategies, and start regulating emotions (Gross, 2014). This development starts early with facial imitation, around six weeks to three months (Meltzoff and Moore, 1992), and continues with children having a wide variety of emotions and becoming better at regulating and managing their emotions; they begin to show signs of empathy, and the ability to understand and share the feelings of others at around two years of age (Thompson, 1987). They may comfort a friend who is crying or apologize when they have done something wrong. The acquisition of emotional regulation skills represents critical milestones in a child's emotional development, fostering the formation and maintenance of strong interpersonal relationships throughout their life (Morris et al., 2017). During childhood, the researchers propose that emotion regulation unfolds through a complex interplay of intrinsic and extrinsic factors (Calkins, 1994). Intrinsic factors encompass the child's unique makeup, including their innate temperament, specific cognitive skills, and the underlying neural and physiological systems that guide and participate in managing emotions. Extrinsic factors shape and refine the child's emotional responses primarily through interactions with caregivers. While this research delves deeper into the external factors, specifically the mother-child relationship and its impact on emotion regulation, it acknowledges the intricate interconnectedness of these intrinsic and extrinsic factors. The bidirectional interplay between "top-down" regulatory control exerted by prefrontal cortical projections to the amygdala and "bottom-up" regulatory influence from the limbic system to higher cortical regions underpins the neurobiological basis of emotion (Kay, 2016). These higher and lower-order systems are profoundly shaped by the quality of early life experiences, particularly family interactions. This bidirectional relationship mirrors the reciprocal influence of both extrinsic and intrinsic factors on neurocircuitry development.

The Adaptive Coping with Emotions Model (ACE) (Berking and Whitley, 2014, p. 21) has seven emotion regulation skills: “awareness, identifying and labeling, understanding, modification, acceptance and tolerance, readiness to confront, effective self-support.” Emotion regulation involves managing feelings. Unconscious automatic processes handle emotions within the comfort zone, while conscious effort is required for those outside that zone. This awareness of consciously being in touch with one’s emotions is crucial for emotion regulation as the first skill. The second skill, identifying and labeling, involves associating emotional experiences with relevant semantic labels, which helps gather information about the feelings. The third skill, understanding, is understanding the cause of the feeling, which can help find meaning in an aversive experience. The fourth skill,

modification, means modifying emotions to adapt to the situation according to their quality, intensity, or duration. The fifth skill, acceptance and tolerance, is to be able to tolerate negative emotions in unchangeable situations. The sixth skill, readiness to confront, is the ability to face situations that can trigger negative emotions. The seventh skill, effective self-support, is showing self-compassion, self-soothing, self-encouragement, and active self-coaching (Berking and Whitley, 2014).

The development of emotion regulation is critical, and its deficiency can be a predictor of psychopathology (Calkins and Dedmon, 2000; Calkins and Fox, 2002), such as children who grow up in a negative environment are likely to develop a changed autonomic nervous system, which results in a deficiency in emotion regulation and self-regulation by being more sensitive to environmental demands by overreacting/underreacting. Emotion regulation deficiency can significantly impact mental health, according to the ART Developmental Model of Emotion Regulation Deficits (Berking and Whitley, 2014); genetics, early adverse life events, no adaptive coaching, no adaptive emotion regulation coaching, and such early life experiences can result in fear of emotions, avoidance schema, negative self-image, and low emotional self-efficacy and eventually contributing to the development of mental disorders. Berking and Whitley (2014) also propose that deficits in emotion regulation can perpetuate or intensify negative affective states, trigger dysfunctional or maladaptive cognitive and behavioral coping mechanisms, and hinder the experience of positive emotions; these can ultimately contribute to the diagnostic criteria for conditions such as depression or anxiety.

Emotion regulation is crucial against the development of PTSD (Nagulendran et al., 2020). Hence, the difficulty in emotion regulation can increase the severity of traumatic stress (Badour and Feldner, 2013). Difficulties in emotion regulation are also associated with higher depression, anxiety, and PTSD (Eftekhari et al., 2009). In summary, effective emotion regulation plays a critical role in the context of traumatic stress and PTSD.

Emotion regulation has been mainly studied as a protective or promoting factor for resilience in the literature (Tugade and Fredrickson, 2007; Troy and Mauss, 2011). Adaptive emotion regulation strategies, such as cognitive reappraisal, putting into perspective, and positive refocusing, are positive, and maladaptive emotion regulation strategies, such as rumination, catastrophizing, and self-blame are negatively predicting resilience (Hoorelbeke et al., 2016). According to Troy and Mauss (2011), cognitive emotion regulation abilities, selective attention control, and cognitive reappraisal play a crucial role as moderators

between stressful life events and resilience. By enhancing adaptive emotional responses, these strategies contribute to an overall increase in resilience. Also, down-regulating negative and up-regulating positive emotions are effective in enhancing resilience (Kay, 2016). Up-regulating positive emotions can also reduce negative emotions and promote resilience in adversity (Kay, 2016).

1.4. Cognitive Flexibility

Cognitive flexibility is a form of fluid intelligence that involves adapting cognitive process strategies and generating alternative solutions to different situations and events (Silver et al., 2004). While there is no precise definition of cognitive flexibility, operational definitions typically encompass “the ability to shift between different tasks or goals” (Buttelmann and Karbach, 2017, p. 1). Cognitive flexibility is considered within the scope of cognitive control (Morton et al., 2011), which expresses the ability to focus on goal-oriented information and inhibit irrelevant information or a parallel process (Zaehringer et al., 2018). Cognitive control and cognitive flexibility represent essential elements of executive functions, allowing individuals to adjust to dynamic environments and effectively manage their mental processes (Buttelmann and Karbach, 2017).

It is suggested that individuals with high cognitive flexibility may be happier (Asıcı and İkiz, 2015). Cognitive flexibility is essential for adaptive behavior and significantly reduces stress symptoms (Taufani et al., 2022). Cognitive flexibility can reduce the negative cognitive changes following the stressor (Chaby et al., 2019).

Cognitive flexibility and the ability to adapt one’s thinking strategies in various emotional situations contribute to decreased traumatic stress. Cognitive flexibility was found to be a significant predictor of traumatic stress after trauma exposure as a resilience factor (Ben-Zion et al., 2018). It can also reduce the cognitive deficits seen in PTSD (Chaby et al., 2019).

According to the literature, cognitive flexibility has a significantly positive relationship with resilience (Ram et al., 2019; Soltani et al., 2013; Sünbül, 2020; Taghizadeh and Farmani, 2014). Cognitive flexibility’s (1) reappraising, reframing, and assimilating stress/trauma and (2) accepting stress/trauma and failure as ingredients for growth components are associated with resilience (Iacoviello and Charney, 2020). Golestanibakht (2022) reports that positive psychology training aimed at enhancing wisdom, resilience, and cognitive flexibility resulted in notable changes in these factors among students.

1.5. Self-efficacy

General self-efficacy can be defined as belief in one's capabilities in times of adversity (Benight and Cieslak, 2011). This definition is more like a general construct rather than being domain-specified and has aspects like one's perceived self-efficacy and self-efficacy beliefs. Perceived self-efficacy is defined as "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives" (Bandura, 1994, p.1). Self-efficacy beliefs are defined as "life choices, level of motivation, quality of functioning, resilience to adversity, and vulnerability to stress and depression" (Bandura, 1994, p.16). Self-efficacy beliefs contribute to setting challenges, firmer commitment to them, more effort to spend on them, how long they will endure their difficulties, and resilience to failures. Self-efficacy is also an important part of the cognitive appraisal process necessary for coping with stress. Individuals with low self-efficacy may feel that they do not have sufficient resources to cope with stress or difficulties, whereas individuals with high self-efficacy may feel that they have sufficient resources and can overcome difficulties (Yelpaze, 2020). Overall, self-efficacy beliefs fully affect every aspect of personal change, including life choices and resilience to adversity and vulnerability (Bandura, 1994).

Self-efficacy is a protective factor against stress (Gallagher et al., 2019; Jögi et al., 2022); research indicates that self-efficacy beliefs are positively associated with more significant positive affect and reduced physiological stress. Notably, Luszczynska et al. (2009) found that self-efficacy has moderate to significant effects on psychological distress and traumatic stress following collective trauma; individuals with self-efficacy beliefs tend to experience significantly lower psychological distress and traumatic stress. Additionally, self-efficacy positively impacts somatic health, encompassing self-reported symptoms such as pain and fatigue. In summary, fostering self-efficacy can reduce traumatic stress (Blackburn & Owens, 2014), even in the context of various mental disorders, including depression.

People with high self-efficacy perceptions have beliefs and high intrinsic motivation to overcome a challenge they are facing and thus cope better with challenges (Gupta and Singh, 2014). In the face of adversity, individuals with self-efficacy beliefs, such as believing they have greater control over their thoughts, show enhanced resilience and sustained effort, demonstrating their ability to navigate challenges through cognitive regulation (Hamill, 2003). Positive self-efficacy beliefs were associated with psychological

resilience in students (Cassidy, 2015). Furthermore, the concept of self-efficacy has been effective as a mediator for psychological resilience and factors enhancing psychological resilience in the context of chronic mental and physical disorders (Jia et al., 2020; Zhang et al., 2020.)

1.6. Self-compassion

Self-compassion can be defined as an individual's expression of compassion towards themselves in difficult situations or events rather than judgmental or critical attitudes (Neff, 2003). Self-compassion necessitates actively forgiving one's errors, accepting inherent limitations stemming from human nature, acknowledging fallibility, and embracing a non-idealized self-image. According to Neff's (2003) theory, self-compassion consists of three components: (a) Self-kindness promotes an empathetic approach which includes kindness and understanding of oneself. Rather than showing harsh self-criticism and judgment, it fosters kindness akin to the compassion and care one extends to loved ones. (b) Common humanity promotes the universality of human experience rather than isolating and alienating oneself from others. It reminds the shared narrative of being human and connects to others. (c) Mindful awareness promotes observing our painful thoughts and emotions without over-identifying with them through more accepting and non-judgemental approaches towards oneself. Self-compassion was positively related to most studied positive psychology features like "kindness, optimism, self-understanding, curiosity, hope, happiness, well-being, acceptance" (Ülker Tümlü, 2020, p. 226).

During stressful life events, people high in self-compassion may perceive stressors as less threatening and have more positive evaluations of themselves, which may provide a better way to cope with stress (Sirois et al., 2015). Self-compassion protects against stress (Breines et al., 2014) and traumatic stress (Matos et al., 2021). Self-compassion is highly effective in the level of traumatic stress an individual will experience after a challenging experience or trauma and in achieving post-traumatic growth (Matos et al., 2021; Nabilah and Kusristanti, 2021). Overall, self-compassion positively affects mental health and well-being (Raque-Bogdan et al., 2011). It can be a protective factor against anxiety and depression, and it can enhance resilience and facilitate coping with stress (Ülker Tümlü, 2020).

Self-compassion involves being aware of one's own positive and negative emotions and being able to process these emotions with a healthy approach (Ülker Tümlü, 2020). It also requires the use of emotion regulation strategies to achieve this outcome. According to

the Adaptive Coping with Emotions Model (Berking and Whitley, 2014), effective self-support is an essential factor for emotion regulation, and it has three components: self-compassion, self-soothing and self-encouragement, active self-coaching. Self-compassion has a recovery role for the impact of the trauma, and emotion dysregulation mediates their relationship (Scoglio et al., 2018), pointing out the essential roles of emotion regulation and self-compassion on mental health.

Self-compassion has a buffering effect on emotional challenges and can strengthen resilience (Bluth et al., 2018). To conclude, self-compassion can be viewed as a coping skill and resilience-enhancing feature. According to Trompetter et al. (2017), enhancing self-compassion is a promising positive intervention. Hence, it can reduce stress-related psychopathologies by reducing self-criticism and rumination and by increasing self-kindness and positive emotions.

1.7. Importance and Purpose

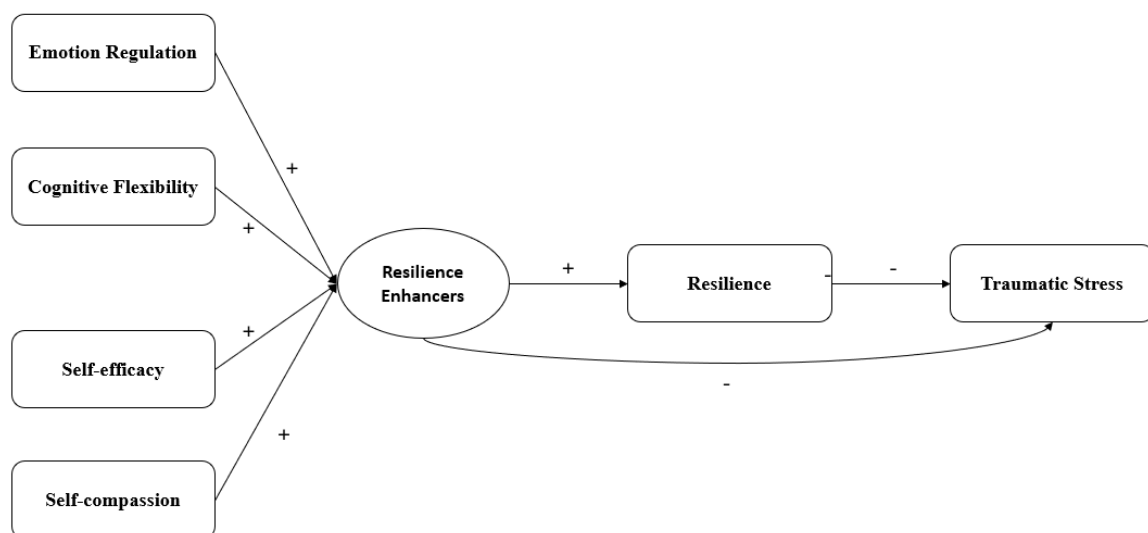
The current study aims to examine emotion regulation, cognitive flexibility, self-efficacy, and self-compassion as resilience-enhancing features and their prediction of resilience. Additionally, it explores whether resilience predicts lower levels of traumatic stress. High resilience is widely recognized as one of the key protective factors against allostatic load (McCaffery et al., 2012), with its multifaceted qualities contributing to healthier recovery processes following trauma. It can help the healthy recovery process after trauma. The current study considers resilience as an adaptive response to trauma, which assumes that resilience and protective features will increase the possibility of giving adaptive and resilient responses after a trauma or stress rather than resolving in vulnerability, which can be considered as less traumatic stress from a traumatic experience. The current study focuses on emotion regulation, cognitive flexibility, self-efficacy, and self-compassion as resilience-enhancing features. It is thought that developing these features, in addition to high resilience, may also protect against allostatic load and vulnerability, which is related to less traumatic stress after traumatic experiences. There is evidence in the literature that each of these features plays an essential role in the process of coping with traumatic stress (Chaby et al., 2019; Gallagher et al., 2019; Matos et al., 2021; Nagulendran et al., 2020; Yelpaze, 2020). However, the limited number of studies that address these concepts altogether demonstrates the importance and necessity of the current study. This research aims to bridge this gap by contributing to theoretical knowledge and offering practical insights for clinical applications. The findings are expected to provide valuable information that can inform the

development of intervention programs aimed at enhancing individuals' coping skills with traumatic stress. In this context, the study findings are expected to provide valuable information that can be used in the design of intervention programs to improve individuals' coping skills with traumatic stress. In light of the information provided so far in the literature, the current study aims to investigate the relationships between resilience-enhancing features, resilience, and traumatic stress in individuals with traumatic experiences and to propose an explanatory model of resilience. This explanatory model of resilience is anticipated to contribute to the existing cognitive models of resilience in the literature. In addition to these cognitive processes, the model is expected to offer insights into the characteristics that enhance psychological resilience and facilitate coping with trauma.

1.8. Research Problems and Hypotheses

The current study aims to examine emotion regulation, cognitive flexibility, self-efficacy, and self-compassion as resilience-enhancing features and their prediction of resilience, as well as whether resilience will result in the prediction of traumatic stress. The proposed conceptual diagram can be found in Figure 1.

Figure 1.1. *Conceptual Diagram of Resilience and Resilience-enhancing Features and Their Relations with Traumatic Stress*



Hypothesis 1: Self-efficacy, self-compassion, emotion regulation, and cognitive flexibility positively predict resilience.

Hypothesis 2: Self-efficacy, self-compassion, emotion regulation, and cognitive flexibility negatively predict traumatic stress.

Hypothesis 3: Resilience negatively predicts traumatic stress after a traumatic event.

2. METHOD

2.1. Participants

The data was collected from voluntary people over the age of 18, following the approval of the research ethics board. Participants were found with a random selection from universities and with a snowball technique from the population. Inclusion criteria for participation involve the presence of at least one traumatic experience signified on The Posttraumatic Diagnostic Scale. The first exclusion criterion for participation is having a mental disorder diagnosis, especially having a post-traumatic stress disorder diagnosis within a year; although resilience is a protective factor against mental disorders, it can be lower in people with mental disorders (Shrivastava and Desousa, 2016). According to Kline (2011), a sufficient sample size should be 10, ideally 20 per parameter in the model. The number of estimated parameters was 15 (calculated from 9 loadings of the 6 observed variables plus 6 measurement errors); hence, collecting data from 300 participants was planned. Additionally, simulation analysis for one casual mediator was run, and a standardized mediator model ($M = \beta_{mt}T + X\beta_{mx} + \epsilon_M$) was used. To reach a 90% power with an alpha value of .05, data should be collected from 316 people (Qin, 2023).

In line with the determined criteria, the data was collected from 617 participants between 26 February 2024 and 26 April. 169 participants who did not correctly answer the trap question or did not finish the form were excluded from the data. The trap question consists of an item that is randomly placed in the scales as 'If you have read this question, tick 5'. 125 participants who reported not having a trauma or traumatic experience and 51 participants who reported having a mental disorder were excluded from the data. After the data screening process, the study was conducted with 266 participants.

According to the data, the age mean is 24.40; 223 of the participants were female (83.8%), 41 were male (15.4%), and 2 participants selected the “other” option (0.8%) in terms of sex. Other information about the demographics of participants in the study is given in Table 1.

The data has 266 participants who had at least one traumatic experience. In terms of trauma types, the demographics of the participants are as follows, with participants having more than one traumatic experience, so the total percentage does not add up to 100%. 36 of the participants had experienced a serious accident, fire, or explosion (13.5%), 82 of the participants had experienced a natural disaster (30.8%), 10 of the participants had

experienced non-sexual assault from a family member or someone familiar (3.8%), 6 of the participants had experienced non-sexual assault from they do not know (2.3%), 9 of the participants had experienced sexual assault from a family member or someone familiar (3.4%), 8 of the participants had experienced sexual assault from someone they do not know (3.0%), 4 of the participants had experienced being in a military conflict or battlefield (1.5%), 9 of the participants had experienced sexual contact with someone 5 years or older when they were underaged (3.4%), 14 of the participants had experienced a life-threatening illness (5.3%), 143 of the participants had experienced sudden death of a loved one (53.8%), and 16 of the participants had other traumatic experiences (6%).

Table 2.1. *Characteristics of Sample*

Variable	All	
	<i>N</i>	%
Sex		
Women	223	83.8
Men	41	15.4
Other	2	.8
Education		
Primary school	1	.4
Middle school	0	0
High school	25	9.4
Bachelors	212	79.7
Graduate School	28	10.5
Income rate		
Very low	0	0
Low	6	2.3
Medium	171	64.3
High	86	32.3
Very high	3	1.1

Marital status		
Married	27	10.2
Single	231	86.8
Other	8	3.0

Note. N = Participant Number.

2.2. Measures

2.2.1. Informed consent form

The purpose of this form is to thoroughly introduce participants to the research and formally secure their consent to participate. It also includes information regarding recalling their consent if they will no longer participate for any reason, including the nature of the scales. The form can be found in Appendix 1.

2.2.2. Demographic form

This form collects information about the participants' demographics. It includes questions about age, assigned sex, educational background, evaluated level of income, marital status, chronic illness, medication use, and mental disorders. The form can be found in Appendix 2.

2.2.3. The posttraumatic diagnostic scale

The Posttraumatic Diagnostic Scale was developed by Foa et. al (1997), and it is being used for assessing the diagnostic criteria for post-traumatic stress disorder (PTSD) and trauma severity via self-report. The scale has 50 items and 4 parts. Part one assesses the trauma type, part two assesses the most affected trauma and its time, part three assesses the traumatic stress, and part four assesses impairment in life areas. The test-retest reliability coefficient of the scale was $r = .83$. Cronbach alpha internal consistency coefficient for the PTSD symptoms was $\alpha = 0.92$.

The Turkish validity and reliability study of the scale has been conducted by Işıklı (2022). The test-retest reliability coefficient of part three, which assesses traumatic stress, was $r = .92$ to $r = .81$. Cronbach's alpha internal consistency score for part three was $r = 0.83$. The Cronbach alpha internal consistency coefficient of the scale for the current study was found $\alpha = .91$. The scale can be found in Appendix 3.

2.2.4. Resilience scale for adults

The Resilience Scale for Adults (RSA) was developed originally by Fribog et al. (2003), and it is being used to measure resilience in the adult population via self-report. The scale was adjusted later by Fribog (2005), summarizing the reliability and validity of studies they have conducted. The scale has 33 items and a semantic differential response format. The scale had four subdimensions, and their Cronbach alpha internal consistency coefficient ranged from $\alpha = .83$ to $\alpha = .90$. The personal structure subdimension had a slightly lower Cronbach alpha internal consistency score, $\alpha = .67$. Therefore, in the following studies, the personal structure subdimension has been split into two subdimensions: self-perception and future perception. This has resulted in a six subdimension structure, personal strength with two sub-factors as perception of self, and perception of future; social competence, structured style, family cohesion, and social resources. The four-month test-retest reliability coefficient of the scale was high, ranging from $r = .73$ to $r = .84$. The Cronbach alpha internal consistency coefficient ranged from $\alpha = .67$ (RSA-personal structure) to $\alpha = .81$ (RSA-Perception of self). Reverse-scored items are “1, 3, 4, 8, 11, 12, 13, 14, 15, 16, 23, 24, 25, 27, 31, 33”.

The Turkish validity and reliability study of RSA has been conducted by Basım and Çetin (2011). The test-retest reliability coefficient of the scale within 23 days ranged from $r = .72$ to $r = .81$. Cronbach's alpha internal consistency score for the sub-dimensions ranged from $r = 0.66$ to $r = 0.81$ for the student sample, and $\alpha = 0.68$ to $\alpha = 0.79$ for the employee sample. Overall, the Cronbach alpha internal consistency coefficient of the scale was $\alpha = .86$. The Cronbach alpha internal consistency coefficient of the scale for the current study was found to be $\alpha = .91$. The scale can be found in Appendix 4.

2.2.5. Emotion regulation skills questionnaire

The Emotion Regulation Skills Questionnaire (ERSQ) was developed by Berking and Znoj (2008), and it is being used to measure emotion regulation skills via self-report. The scale has 27 items and 9 subdimensions with a 5-point Likert scale of 0 (never) to 4 (almost always). Cronbach alpha internal consistency coefficient for the sub-dimensions ranged from $\alpha = 0.74$ to $\alpha = 0.92$. Overall, Cronbach alpha internal consistency coefficient of the scale was $\alpha = .96$.

The Turkish validity and reliability study of the scale has been conducted by Vatan and Oruçular Kahya (2018). Cronbach alpha internal consistency coefficient for the sub-

dimensions ranged from $\alpha = 0.49$ to $\alpha = 0.75$. Overall, the Cronbach alpha internal consistency coefficient of the scale was $\alpha = .89$. The Cronbach alpha internal consistency coefficient of the scale for the current study was found to be $\alpha = .95$. The scale can be found in Appendix 5.

2.2.6. Cognitive flexibility inventory

The Cognitive Flexibility Inventory (CFI) was developed by Dennis and Wal (2010), and it is being used to measure the ability of people to generate alternative, compatible, appropriate, and balanced thoughts in difficult situations via self-report, higher scores on the scale are indicative of greater cognitive flexibility. The scale has 20 items and two subdimensions, alternatives and control. The Cronbach alpha reliability coefficient was $\alpha = .91$ for the alternatives subdimension and $\alpha = .84$ for the control subdimension. The scale uses a 5-point Likert scale from 1 (not at all appropriate) to 5 (totally appropriate) for scoring. Reverse-scored items are “2, 4, 7, 9, 11, 17”.

The Turkish validity and reliability of CFI has been conducted by Gülüm and Dağ (2012). The test-retest reliability coefficient of the scale within 2 weeks ranged from $r = .22$ to $r = .81$ for the control sub-dimension. The Cronbach alpha reliability coefficient was $\alpha = .90$ for the overall scale, $\alpha = .89$ for the alternatives subdimension, and $\alpha = .85$ for the control subdimension. The Cronbach alpha internal consistency coefficient of the scale for the current study was found $\alpha = .89$. The scale can be found in Appendix 6.

2.2.7. General self-efficacy scale

Self-efficacy Scale was developed by Sherer et al. (1982), and it is being used to measure self-efficacy. Higher scores on the scale are indicative of greater self-efficacy via self-report. The scale originally had 23 items and two subdimensions, general self-efficacy (17 items) and social self-efficacy (6 items). The Cronbach alpha reliability coefficient was $\alpha = .86$ for the general self-efficacy subdimension and $\alpha = .71$ for the social self-efficacy subdimension. The scale uses a 5-point Likert scale of 1 (not at all) to 5 (very well) in which responses to the question "How well does it describe you?".

The Turkish validity and reliability of the general self-efficacy subdimension with 17 questions have been conducted by Yıldırım and İlhan (2010). Reverse-scored items are “2, 4, 5, 6, 7, 10, 11, 12, 14, 16, 17”. The test-retest reliability coefficient of the scale was $r = .69$. The Cronbach alpha reliability coefficient was $\alpha = .80$. The Cronbach alpha internal

consistency coefficient of the scale for the current study was found $\alpha = .92$. The scale can be found in the Appendix 7.

2.2.8. Self-compassion scale

The Self-Compassion Scale (SCS) was developed by Neff (2003) and is being used to assess self-compassion via self-report. The scale's three weeks' test-retest correlations were high, ranging from $r = .80$ to $r = .88$ and $r = .93$ for the overall score. The scale has 26 items with six subdimensions: self-kindness, self-judgment, common humanity, isolation, mindfulness, and overidentification. The scale uses a 5-point Likert scale (1=never, 2=rarely, 3=sometimes, 4=often, 5=always) for scoring. Reverse-scored items are “3, 4, 5, 7, 10, 11, 15, 16, 19, 20, 24, 25, 26”. A higher total score on the scale indicates higher self-compassion. The Turkish validity and reliability of SCS have been conducted by Akın et. al (2007). The test-retest scores ranged from $r = 0.56$ to $r = 0.69$. Cronbach alpha internal consistency coefficient for the sub-dimensions ranged from $\alpha = 0.72$ to $\alpha = 0.80$. The Cronbach alpha internal consistency coefficient of the scale for the current study was found $\alpha = .96$. The scale can be found in Appendix 8.

2.3. Procedure

Ethical approval was obtained from the Başkent University Social and Human Sciences and Art Research Committee. Participants were found using a random selection from universities and a snowball technique from the population using social media platforms. The data was collected online through the SurveyMonkey platform. The informed consent asked the participants to continue. The form ended with an informative message for the excluded participants, and the included participants continued to the Posttraumatic Diagnostic Scale Resilience Scale for Adults, Emotion Regulation Skills Questionnaire, Cognitive Flexibility Scale, Self-efficacy Scale, and Self-compassion Scale. When the survey form is completed, the participation in the study is finished.

2.4. Analysis

In the current study, IBM SPSS Statistics 26 packaged software and IBM SPSS AMOS 22 was used to make statistical analyses of collected data. A cross-sectional study was conducted to examine the relationship between the traumatic stress of past traumatic experiences and their association with self-compassion, self-efficacy, cognitive flexibility, and emotion regulation as resilience-enhancing features using path analysis. Firstly, the relationship between sociodemographics and study variables relationships was examined.

Reported sex (woman and men) and study variables were tested using independent samples t-tests. Other demographics, an education level (primary school, middle school, high school, bachelor, graduate school), and evaluated level of income (very low, low, middle, high, very high) were analyzed using one-way between-groups variance analyses. Then, the correlation between variables was examined. After finding significant relationships between study variables, the trauma's type, qualities, and time were examined. Trauma type (human-made, natural, cumulative) and resilience relationships were analyzed using one-way between-groups variance analyses. Trauma qualities (whether trauma includes a physical injury, whether trauma includes physical injury of someone else, whether trauma included a life-threatening situation, whether trauma included a life-threatening situation for someone else, whether they felt hopelessness during trauma, whether they felt horror during trauma) and traumatic stress relationships were analyzed using 6 independent samples t-test. Traumatic experience at different time intervals (traumatic experience within 3 years, traumatic experience more than 3 years ago) and participants' traumatic stress relationships were analyzed using independent samples t-test. Lastly, path analysis estimated the prediction power of the variables, whether self-efficacy, self-compassion, emotion regulation, and cognitive flexibility positively predict resilience, which results in less traumatic stress from traumatic experiences.

3. RESULTS

In the current study, correlation, independent samples t-tests, one-way between-groups analysis of variance, and path analyses were applied to examine the study variables.

3.1. Data Analytic Strategy

Data screening procedures were conducted after the exclusion criteria were applied. There were no missing variables. Univariate outliers were checked by z-scores. 3 participants' z-scores exceeding the point of 3.29 (Tabachnick and Fidell, 2013) were excluded from the study. To check the multivariate outliers, Mahalanobis distance scores were evaluated with χ^2 distribution at the significance level of $p < .001$. 3 cases were excluded from the data, with Mahalanobis distance scores higher than a cut-off score of 22.09. The study was conducted with 266 participants. Normality assumptions (skewness and kurtosis) were tested, and the results show that assumptions were met, which means parametric tests can be used (Tabachnick and Fidell, 2013).

In the current study, a Pearson correlation analysis was conducted to examine the relationships between scales by using IBM SPSS (version 26). Then, to examine the relationship between trauma experienced at different time intervals and participants' traumatic stress levels, one-way between-groups ANOVA was used. IBM SPSS AMOS (version 22) conducted a path analysis and model comparison to examine the relationship between the traumatic stress of past traumatic experiences and their association with self-compassion, self-efficacy, cognitive flexibility, and emotion regulation as qualities of resilience-enhancing features. There is no consensus on which model fit indices should be reported; the fit ranges of the selected model fit indices for reporting are provided in Table 2 (İlhan and Çetin, 2014).

Table 3.1. *Acceptable Fit Indexes for A Model*

Model Indexes	Perfect Model Indexes	Acceptable Model Indexes
χ^2 /sd	≤ 2	≤ 3
RMSEA	$.00 \leq RMSEA \leq .05$	$.05 \leq RMSEA \leq .08$
NFI	$.95 \leq NFI \leq 1.00$	$.90 \leq NFI \leq .95$
GFI	$.95 \leq GFI \leq 1.00$	$.90 \leq GFI \leq .95$

AGFI	$.90 \leq \text{AGFI} \leq 1.00$	$.85 \leq \text{AGFI} \leq .90$
CFI	$.95 \leq \text{CFI} \leq 1.00$	$.90 \leq \text{CFI} \leq .95$
TLI	$.95 \leq \text{TLI} \leq 1.00$	$.90 \leq \text{TLI} \leq .95$

Note. χ^2/df , Chi-Square/Degrees of Freedom; RMSEA, Root Mean Square Error of Approximation; NFI, Normed Fit Index; GFI, Goodness Of Fit Index; AGFI, Adjusted Goodness of Fit Index; CFI, Comparative Fit Index; TLI Tucker-Lewis Index.

3.2. Results of Sociodemographics and Study Variables

The sociodemographic information collected from the participants was examined to understand better the sample characteristics and their relationships with study variables. Firstly, the difference between sex and study variables was examined. Since only 2 of the participants who were asked to indicate their sex selected the ‘other’ option, and the number was too small to be included in the analysis, independent sample t-tests were conducted on women ($n = 223$) and men ($n = 41$) for the examination of the study variables. Levene’s test indicated equal variances for the cognitive flexibility score ($F = .89, p = .89$). A significant difference was found between women and men for cognitive flexibility ($t(262) = -2.50, p = .01$, Cohen’s $d = .17$). Men ($M = 78.78, SD = 11.18$) showed significantly higher cognitive flexibility than women ($M = 74.52, SD = 9.79$). Participants’s traumatic stress, resilience, emotion regulation, self-efficacy, and self-compassion did not significantly differ by their sex.

Table 3.2. Sex and Cognitive Flexibility Independent Samples T-test Results

Sex	N	M	SD	t(262)	p	Effect Size
Female	223	74.52	9.79	-2.50	.01	.17
Male	41	78.78	11.18			

Note. N = Participant Number; M = Mean; SD = Standard Deviation; The value in parentheses is the degree of freedom.

$p < .05$.

Then, the difference between education level and study variables was examined. Since only 1 of the participants graduated from primary school, and the number was too small to be included in the analysis, this participant was excluded in this one-way between-groups variance analysis, which was conducted to examine the difference between education level (high school, bachelors, graduate school) and study variables. Firstly, the difference in traumatic stress regarding education level was examined. Levene’s test indicated equal variances for the traumatic stress score ($F = 1.34$ $p = .26$). Traumatic stress significantly differed by education level ($F(2,262) = 5.32$, $p = .01$, $\eta^2 = .04$). According to Bonferoni post-hocs, bachelors students ($n = 212$, $M = 13.71$, $SD = 9.46$) did significantly show higher traumatic stress than graduate students ($n = 28$, $M = 7.64$, $SD = 7.24$). Participant’s resilience, emotion regulation, cognitive flexibility, self-efficacy, and self-compassion did not significantly differ by their education level.

Table 3.3. *Education Level and Traumatic Stress One-way Variance Analysis Results*

Education Level	Traumatic Stress			F(2,263)	η^2
	N	M	SD		
High School	25	11.88	10.90	5.32	.04
Bachelors	212	13.71	9.46		
Graduate School	28	7.64	7.24		

Note. N = Participant Number. M = Mean; SD = Standard Deviation; F = F Distribution; η^2 = Eta-squared. $p < .05$.

One-way between-group analysis of variance was conducted to examine the relationship between the evaluated level of income and study variables. Firstly, the difference in resilience regarding the evaluated income level was examined. Levene’s test indicated equal variances for the evaluated level of income ($F = 1.84$ $p = .14$). Resilience significantly differed by the evaluated level of income ($F(3,262) = 3.73$, $p = .01$, $\eta^2 = .$). According to

Bonferoni's post-hocs, there were no differences regarding resilience between low, medium, high, and very high-income groups. Participants' traumatic stress, emotion regulation, cognitive flexibility, self-efficacy, and self-compassion did not significantly differ by their evaluated level of income.

3.3. Correlations Between Study Variables

Correlation analyses have been conducted to examine the relationships between the variables (see Table 3). As expected, traumatic stress and resilience ($r = -.32, p < .01$), emotion regulation ($r = -.27, p < .01$), cognitive flexibility ($r = -.25, p < .01$), self-efficacy ($r = -.25, p < .01$), and self-compassion ($r = -.36, p < .01$) are negatively correlated. There is a positive significant relationship between resilience and emotion regulation ($r = .55, p < .01$), cognitive flexibility ($r = .49, p < .01$), self-efficacy ($r = .63, p < .01$), and self-compassion ($r = .62, p < .01$).

Table 3.4. *Correlations Between Traumatic Stress, Resilience, Emotion Regulation, Cognitive-flexibility, Self-efficacy, Self-compassion*

Variable	M	SD	1	2	3	4	5	6
1. Traumatic Stress	12.88	9.54	-					
2. Resilience	164.95	27.71	-.32**	-				
3. Emotion Regulation	65.37	16.62	-.27**	.55**	-			
4. Cognitive Flexibility	75.18	10.08	-.25**	.49**	.57**	-		
5. Self-efficacy	59.43	11.00	-.25**	.63**	.55**	.71**	-	
6. Self-compassion	85.08	19.53	-.36**	.62**	.62**	.63**	.66**	-

Note. M = Mean; SD = Standard Deviation.

** $p = .01$.

3.4. Results of Trauma Type and Resilience

The examination of the trauma characteristics, such as trauma type, trauma qualities, and trauma time, would give important information regarding the predictors of traumatic stress. Considering the classification of trauma types, this study's trauma types were divided into three categories: human-made ($n = 69$), natural disasters ($n = 146$), and cumulative traumas ($n = 51$). When participants were asked to select the traumas they were most affected by, they chose whether a human-made trauma, natural disaster, or cumulative trauma, which includes more than one trauma. Human-made traumas included fire or explosion, non-sexual assault from a family member or someone familiar, non-sexual assault from they do not know, sexual assault from a family member or someone familiar, sexual assault from someone they do not know, being in a military conflict or battlefield, had experienced sexual contact with someone five years or older when they were underaged, other traumatic experiences. Natural disasters include a severe accident, a natural disaster, a life-threatening illness, or the sudden death of a loved one. One-way between-group variance analyses examined the relationship between trauma type and study variables (see Table 4).

Levene's test indicated equal variances for resilience ($F = .42, p = .66$). Resilience significantly differed according to the trauma type ($F(2, 263) = 3.91, p = .02, \eta^2 = .03$). Bonferroni Post Hoc Test revealed only one group difference, human-made disaster survivors ($M = 157.71, SD = 27.43$) showed lower resilience than cumulative trauma survivors ($M = 171.27, SD = 26.87$) ($p = .24$). Trauma type and other study variables are not significantly related.

Table 3.5. *Trauma Type and Psychological Resilience One-way Variance Analysis Results*

Trauma Type	Resilience			F(2,263)	η^2
	N	M	SD		
Human-made	69	157.71	27.43	3.91	.03
Natural	146	166.17	27.59		

Cumulative 51 171.27 26.87

Note. N = Participant Number. M = Mean; SD = Standard Deviation; F = F Distribution; η^2 = Eta-squared.
 $p < .05$.

3.5. Results of Trauma Qualities and Traumatic Stress

Six independent samples t-test has been conducted to examine the relationship between trauma qualities (whether trauma includes a physical injury, whether trauma includes physical injury of someone else, whether trauma included a life-threatening situation, whether trauma included a life-threatening situation for someone else, whether they felt hopelessness during trauma, whether they felt horror during trauma) and traumatic stress (see Table 5).

Levene's test indicated unequal variances for people who had a traumatic experience that includes physical injury ($F = 4.96, p = .03$). Traumatic stress regarding people who had a traumatic experience that includes physical injury ($M = 12.50, SD = 12.40$) did not significantly differ ($t(25.59) = -.16, p = .88$) from people who had the traumatic experience without physical injury ($M = 12.91, SD = 9.24$).

Levene's test indicated equal variances for people who had a traumatic experience that included physical injury of someone else ($F = .15, p = .70$). Traumatic stress regarding people who had a traumatic experience that includes physical injury of someone else ($M = 13.20, SD = 9.69$) did not significantly differ ($t(264) = .38, p = .71$) from people who had the traumatic experience without a physical injury of someone else ($M = 12.72, SD = 9.49$).

Levene's test indicated equal variances for people who had a traumatic experience that includes a threat to life ($F = 2.16, p = .14$). Traumatic stress regarding people who had a traumatic experience that includes a threat to life ($M = 13.96, SD = 10.19$) did not significantly differ ($t(264) = 1.66, p = .10$) from people who had the traumatic experience without a threat to life ($M = 12.03, SD = 8.94$).

Levene's test indicated equal variances for people who had a traumatic experience that includes a threat to the life of someone else ($F = .08, p = .78$). Traumatic stress regarding people who had a traumatic experience that includes a threat to life of someone else ($M = 13.84, SD = 9.31, \text{Cohen's } d = .13$) did significantly differ ($t(264) = 2.07, p = .04$) from people who had the traumatic experience without a threat to life of someone else ($M = 11.38, SD = 9.74$).

Levene's test indicated equal variances for people who had a traumatic experience that included hopelessness ($F = .49, p = .48$). Traumatic stress regarding people who had a traumatic experience that included hopelessness ($M = 13.25, SD = 9.50$) did significantly differ ($t(264) = 2.62, p = .01, \text{Cohen's } d = .27$) from people who had the traumatic experience without hopelessness ($M = 6.67, SD = 8.14$).

Levene's test indicated equal variances for people who had a traumatic experience that included horror ($F = 1.74, p = .18$). Traumatic stress regarding people who had a traumatic experience that included horror ($M = 13.45, SD = 9.64$) did significantly differ ($t(264) = 2.51, p = .01, \text{Cohen's } d = .18$) from people who had the traumatic experience without hopelessness ($M = 9.19, SD = 8.05$).

Table 3.6. *Trauma Qualities and Traumatic Stress Independent Samples T-tests Results*

Qualities	N	M	SD	t(264)	p	Effect Size
Physical Injury						
Yes	24	12.50	12.40	-.16	.88	ns
No	242	12.91	9.24			
Someone Else's Physical Injury						
Yes	85	13.20	9.69	.38	.71	ns
No	181	12.72	9.49			
Life Threatening						
Yes	116	13.97	10.19	1.66	.10	ns
No	150	12.03	8.94			
Someone Else's Life-Threatening						

Yes	162	13.84	9.31	2.07	.04	.13
No	104	11.38	9.74			
Hopelessness						
Yes	251	13.25	9.50	2.62	.01	.27
No	15	6.67	8.14			
Horror						
Yes	230	13.45	9.64	2.51	.01	.18
No	36	9.19	8.05			

Note. *N* = Participant Number; *M* = Mean; *SD* = Standard Deviation; The value in parentheses is the degree of freedom.

$p < .05$.

3.6. Results of Trauma Exposure Time and Traumatic Stress

Independent samples t-test was conducted to examine the relationship between reported trauma time and participants' traumatic stress levels (Table 6). Participants reported traumatic experiences at different time intervals (less than 1 month, 1-3 months, 3-6 months, 6 months to 3 years, 3-5 years, and more than 5 years). The time frame of the trauma exposure was recorded into two groups (participants who were exposed to their trauma within 3 years and participants who were exposed to their trauma more than 3 years ago). Levene's test indicated equal variances for traumatic stress ($F = 1.53, p = .22$). Participants who exposed to their trauma within 3 years ($M = 14.16, SD = 9.86$) showed higher traumatic stress ($t(264) = 2.46, p = .02$, Cohen's $d = .30$) than participants who exposed to their trauma more than 3 years ago ($M = 11.29, SD = 8.91$).

Table 3.7. Trauma Exposure Time and Traumatic Stress Independent Samples T-test Results

Trauma Exposure Time	N	M	SD	t(264)	p	Effect Size
Within 3 years	147	14.16	9.86	2.46	.02	.30
Past 3 years	119	11.29	8.91			

Note. *N* = Participant Number; *M* = Mean; *SD* = Standard Deviation; The value in parentheses is the degree of freedom.

$p < .05$.

3.7. Results of Path Analyzes for Resilience-enhancing Features, Resilience and Traumatic Stress

To test the main hypothesis of the study, two models have been proposed and tested for the examination of the predictive power of resilience-enhancers (emotion regulation, cognitive flexibility, self-efficacy, and self-compassion) on resilience and traumatic stress and whether resilience will result in predicting traumatic stress. In the initial model, the predictive capacity of resilience-enhancers on traumatic stress is incorporated. In the second model, the predictive power of resilience enhancers on traumatic stress is not included. Instead, resilience-enhancers are used to predict resilience, and the hypothesis is tested as to whether resilience will result in the prediction of traumatic stress.

In the first model, path analyses ($\chi^2 = 35.08$, $p < .001$, RMSEA = .12, NFI = .95, GFI = .96, AGFI = .89, CFI = .96, TLI = .93) showed that emotion regulation ($\beta = .72$, $p < .00$), cognitive flexibility ($\beta = .78$, $p < .00$), self-efficacy ($\beta = .83$, $p < .00$) and self-compassion ($\beta = .83$, $p < .00$) are significantly related as one latent variable called resilience enhancers (see Figure 2). Resilience enhancers positively predict resilience ($\beta = .72$, $p < .00$). Also, resilience enhancers negatively predict traumatic stress ($\beta = -.20$, $p < .00$). There is no significant path between resilience and traumatic stress ($p = .16$). According to Meydan and Şeşen (2011), χ^2/df can also show a good fit for the model under 5. It is observed that the values fall within an acceptable range of fitness (see Table 7).

Figure 3.1. *Statistical Diagram of Resilience and Resilience-enhancing Features and Their Relations with Traumatic Stress (First Model)*

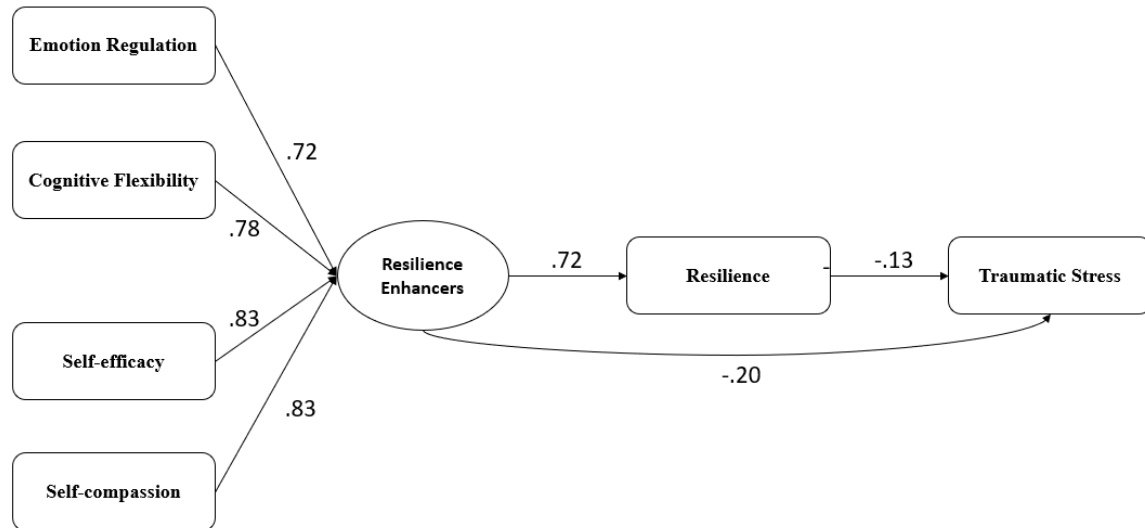


Table 3.8. *Model Indexes of Resilience and Resilience-enhancing Features and Their Relations with Traumatic Stress (First Model)*

Model Indexes	Model Indexes
χ^2 / df	4.39
RMSEA	.12
NFI	.95
GFI	.96
AGFI	.89
CFI	.96
TLI	.93

Note. χ^2/df , Chi-Square/Degrees of Freedom; RMSEA, Root Mean Square Error of Approximation; NFI, Normed Fit Index; GFI, Goodness Of Fit Index; AGFI, Adjusted Goodness of Fit Index; CFI, Comparative Fit Index; TLI Tucker-Lewis Index.

In the second model, path analyses ($\chi^2 = 4^{***}$, $p < .00$, RMSEA = .12, NFI = .94, GFI = .95, AGFI = .89, CFI = .95, TLI = .92) showed that emotion regulation ($\beta = .72$, $p < .00$), cognitive flexibility ($\beta = .78$, $p < .00$), self-efficacy ($\beta = .84$, $p < .00$) and self-compassion ($\beta = .82$, $p < .00$) are significantly related as one latent variable called enhancers, as resilience enhancer qualities (see Figure 3). Resilience enhancers positively predict resilience ($\beta = .72$,

$p < .00$). Resilience negatively predicts traumatic stress ($\beta = -.32, p < .00$), and resilience enhancers also has been found to predict traumatic stress through resilience ($\beta = -.23, p < .00$). It is observed that most values fall within an acceptable range of fitness (see Table 8).

Figure 3.2. *Statistical Diagram of Resilience and Resilience-enhancing Features and Their Relations with Traumatic Stress (Second Model)*

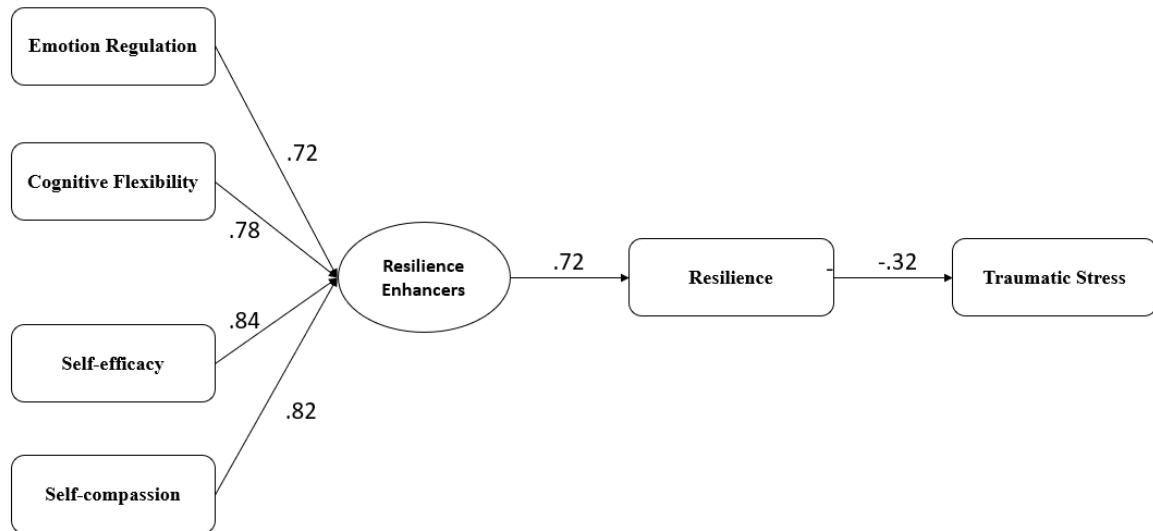


Table 3.9. *Model Indexes of Resilience and Resilience-enhancing Features and Their Relations with Traumatic Stress (Second Model)*

Model Indexes	Model Indexes
χ^2 / df	4.73
RMSEA	.12
NFI	.94
GFI	.95
AGFI	.89
CFI	.95
TLI	.92

Note. χ^2/df , Chi-Square/Degrees of Freedom; RMSEA, Root Mean Square Error of Approximation; NFI, Normed Fit Index; GFI, Goodness Of Fit Index; AGFI, Adjusted Goodness of Fit Index; CFI, Comparative Fit Index; TLI Tucker-Lewis Index.

A model must meet the criteria of at least five fit indices to demonstrate an acceptable level of fit. Hence, both of the models are acceptable (see Table 9). Moreover, χ^2 's of the models are also significant. Therefore, when two models are considered acceptable, the first model fit indexes are better than the second ($\chi^2 = 7.46$, $p < .01$, NFI = .91, IFI = .91, RFI = .907, TLI = .907).

Table 3.10. *Differences Between the First and the Second Model, A Model Comparison Results*

Model Indexes	First Model Indexes	Second Model Indexes
χ^2 / df	4.39	4.73
RMSEA	.12	.12
NFI	.95	.94
GFI	.96	.95
AGFI	.89	.89
CFI	.96	.95
TLI	.93	.92

Note. χ^2/df , Chi-Square/Degrees of Freedom; RMSEA, Root Mean Square Error of Approximation; NFI, Normed Fit Index; GFI, Goodness Of Fit Index; AGFI, Adjusted Goodness of Fit Index; CFI, Comparative Fit Index; TLI Tucker-Lewis Index.

4. DISCUSSION

The current study aimed to examine emotion regulation, cognitive flexibility, self-efficacy, and self-compassion as resilience-enhancing features and their prediction on resilience, whether they will result in the prediction of traumatic stress. Hence, two models were proposed based on the data analyzed from 266 participants with an average age of 24.40, who have experienced at least one traumatic experience. The obtained data were initially examined and cleaned for normality assumptions and outliers. Subsequently, descriptive statistics were computed for the data. Then, correlation analysis was conducted to explore relationships between variables, and path analysis was conducted to interpret the model.

The discussion sections addressed the results of the analyses conducted under the research hypotheses in light of the existing literature. Additionally, this section discussed the current study's limitations, provided suggestions for future research, and provided implications for clinical practice.

4.1. Examination of the Relationship Between Sociodemographics and Study Variables

The sociodemographics of the current study and their relationship with the study variables were examined for a better understanding of the sample's characteristics. Firstly, the relationship between biological sex and study variables was examined. Biological sex was examined heteronormatively, meaning only female and male participants could be compared with each other because other groups had very few participants to be included in the analysis. Therefore, although the current study is representative of normativity, it is not inclusive of the population due to its heteronormative nature; it is only representative of a specific sample that identifies their biological sex as male or female. Cognitive flexibility differed regarding sex. This study's male participants showed greater cognitive flexibility in males than females. Although there are not many studies conducted on humans, rather than animals, for cognitive flexibility, this finding was compatible with studies that found cognitive flexibility and sex relationships (Asıcı and İkiz, 2015; Carter, 1985). Stress-related mental disorders are likely to impair cognitive flexibility, and women are at risk of stress-related mental disorders more than men (Gargiulo et al., 2022). Hence, the finding is compatible with the literature. However, the variance between females ($n = 223$) and males ($n = 41$) may not be sufficiently pronounced for meaningful comparison. Therefore, the study findings regarding biological sex are controversial since the validity of the analysis is

questioned because the group numbers are very far from each other. Emotion regulation, self-efficacy, self-compassion, resilience, and traumatic stress did not differ regarding sex.

Another demographic variable whose effect was observed in this research was the education level. There was a difference between bachelor students and graduate students; bachelor students showed greater traumatic stress than graduate students. Certain professions may be constantly exposed to stress due to job descriptions and requirements or may experience secondary trauma as a result of frequent exposure to traumatized individuals and their trauma (Hensel et al., 2015). Although the literature indicates a greater risk for traumatic stress in some professions (Bahari et al., 2022), the current study participants were not consciously selected from a profession or education level. Therefore, this study finding may indicate the increased resources for graduate students to overcome traumatic experiences. The literature indicated that graduate students' perceived stress levels decreased due to engaging in mindfulness practices related to sleep hygiene, social support, emotion regulation, and acceptance, which were conducted within the context of self-care practices (Myers et al., 2012). It is hypothesized that the graduate students in the current study may, over time, discover specific training programs or knowledge that will enable them to practice self-care and cope with stress. However, the variance between bachelor students ($n = 212$) and graduate students ($n = 28$) may not be sufficiently pronounced for meaningful comparison. Therefore, the study findings regarding education level are controversial since the validity of the analysis is questioned because the group numbers are very far from each other. Emotion regulation, cognitive flexibility, self-efficacy, self-compassion, and resilience did not differ regarding education level.

The difference in resilience regarding the evaluated level of income was examined. The results indicated a difference between the evaluated level of income and resilience, but there were no significant group differences. This finding may indicate that resilience varies according to the evaluated level of income. However, the categories should be organized differently from those used in the demographic form, as the variance between groups is not sufficiently pronounced for meaningful comparison. The literature indicates that resilience and level of income are related; a higher level of income is positively related to resilience (Ni, 2015). Emotion regulation, cognitive flexibility, self-efficacy, self-compassion, and traumatic stress did not differ regarding the evaluated level of income.

4.2. Examination of the Relationships Between Trauma Type, Traumatic Stress and Resilience

Following an examination of the demographic information, the characteristics of trauma were examined to gain a deeper understanding of their impact on traumatic stress. The relationship between traumatic stress and the type of trauma was examined. The categorization of trauma types were revised for more effective statistical analysis and group variances and to align with the classifications recommended by existing literature as follows: human-made traumas (fire or explosion, non-sexual assault from a family member or someone familiar, non-sexual assault from someone they do not know, sexual assault from a family member or someone familiar, sexual assault from someone they do not know, being in a military conflict or battlefield, had experienced sexual contact with someone 5 years or older when they were underaged, other traumatic experiences), natural disasters (a serious accident, a natural disaster, a life-threatening illness, sudden death of a loved one) and cumulative traumas (reported more than one traumatic experience).

The current study did not identify a statistically significant differentiation in traumatic stress levels according to the type of trauma experienced. This finding is inconsistent with existing literature, which posits that human-made traumas, such as violent assaults or accidents, tend to have a more detrimental impact on mental health compared to natural disasters like earthquakes or floods (Haspolat, 2019). Research indicates that certain types of trauma, such as assaultive violence, are more likely to lead to PTSD and higher levels of traumatic stress compared to other types of trauma (Breaslau et al., 2004). In the current study, however, the most frequently reported trauma type was the sudden death of a loved one, accounting for 53.8% of all reported traumas. Although the loss of a loved one is undoubtedly a distressing event, it may not result in the same level of acute traumatic stress or PTSD risk as more direct forms of violence or personal assault. Therefore, the current study may be able to identify significant differentiations. Moreover, the categorization of trauma types in the present study may have been too expansive or simplistic to reflect the complex spectrum of traumatic stress responses accurately. For example, the classification of all human-made traumas together, without consideration of whether they involve personal violence, accidents, or other forms of trauma, may fail to capture the nuances of how these different events affect individuals. A more detailed or refined categorization of trauma types may have revealed variations in traumatic stress that were not apparent under the broader categories employed in this study.

The lack of differentiation in the present study may be attributed to the confounding effect of the earthquake that occurred in Kahramanmaraş on 6 February 2023. The earthquake was a significant disaster that is likely to have had a profound psychological impact on the population, including the participants of this study. The widespread nature and severity of this social trauma may have overshadowed differences in traumatic stress responses that might typically be observed between human-made and natural traumas if many participants were residing in or near the affected areas. In other words, the sheer magnitude and collective experience of the earthquake may have resulted in a convergence of traumatic stress levels across different trauma types, thereby obscuring any potential variation.

In future research, it would be beneficial to consider the timing of traumatic events and their potential overlap when analyzing the impact of different trauma types on mental health outcomes. Additionally, employing more refined measures of trauma exposure and stress responses, as well as controlling for recent major traumatic events, could provide more precise insights into how different types of trauma uniquely contribute to psychological distress. This could involve utilizing more detailed questionnaires or conducting follow-up assessments at various intervals after a significant traumatic event to capture the evolution of stress responses over time.

In conclusion, while the current study did not find differentiation in traumatic stress according to trauma types, this finding highlights the complexities of studying trauma in the context of overlapping or concurrent traumatic events. It underscores the importance of considering both the nature of the trauma and the context in which it occurs when evaluating its psychological impact. It is recommended that future studies address these challenges by employing more advanced research designs and analytical approaches.

However, when the differentiation between trauma types about resilience was examined in the current study, human-made trauma survivors reported significantly less resilience than cumulative trauma. The existing literature is mainly focused on the adverse mental health outcomes of cumulative exposure to trauma (Kira et al., 2013). Cumulative exposure to trauma can increase traumatic stress, depression, and anxiety (Myers et al., 2015). However, the reason why cumulative trauma survivors reported high resilience may be explained by the concept of post-traumatic growth. Post-traumatic growth can be defined as positive changes and outcomes following traumatic stress and negative experiences demonstrated post-traumatically (Park and Fenster, 2004). It is suggested that this growth

amongst participants is not only affected by resilience but also by resilience-enhancing features. Hence, participants may build up a resilient system after their traumatic experience and have better coping mechanisms through other traumatic experiences in their lives. While stressful experiences can have adverse effects, facing them can also foster expanded viewpoints, new coping abilities, stronger relationships, and personal growth (Park and Fenster, 2004).

4.3. Examination of the Relationship Between Trauma Qualities and Traumatic Stress

In the current study, the relationship between trauma qualities and traumatic stress was examined. According to the literature, traumatic experiences involving physical harm to oneself or others increase traumatic stress and adverse post-trauma outcomes (Moscardino et al., 2012). However, the current study findings did not indicate an increase in traumatic stress scores when participants experienced a trauma involving physical injury to themselves or others. However, the variance between the participants who experienced a trauma involving physical injury (n = 24) and the participants who experienced a trauma without involving physical injury (n = 242) may not be sufficiently pronounced for meaningful comparison. Therefore, the study findings regarding trauma involving physical injury are controversial since the validity of the analysis is questioned because the group numbers are very far from each other. Similarly, no differentiation was observed between participants who experienced a trauma involving physical injury to others (n = 85) and those who had not (n = 185).

Moreover, the existing literature suggests that traumatic stress levels tend to rise in individuals who have experienced a traumatic event that posed a threat to their lives (Bilgin et al., 2005). In contrast with the findings of previous studies, the experience of a traumatic event that poses a threat to one's life was not found to increase traumatic stress. This unexpected outcome raises significant questions regarding the factors that may have contributed to this divergence from the established literature. One potential explanation for these controversial findings is methodological in nature, particularly about the validity of the t-test employed in the analysis. The variance between the participants who experienced a trauma involving a life threat (n = 116) and the participants who experienced a trauma without involving a life threat (n = 150) may not be sufficiently pronounced for meaningful comparison. Additionally, it is crucial to recognize that people's perceptions of what constitutes a "life-threatening" event can differ widely. Individuals' perceptions and responses to traumatic events are influenced by personal factors, including resilience, past

trauma, and social support (Lee, 2019). For some individuals, an objectively dangerous event may not result in significant stress if they possess robust coping mechanisms and social support or have previously encountered similar challenges. Conversely, some individuals may experience elevated stress levels in response to events that are typically perceived as less threatening. This variation in personal experiences may account for the lack of significant results in the current study, as participants' interpretations of traumatic events are likely to have affected their reported stress levels. These findings underscore the complexity of trauma and stress responses, indicating that the relationship between life-threatening events and traumatic stress may not be as straightforward as previously assumed. This underscores the necessity for a more comprehensive and nuanced understanding of the multifaceted factors that shape an individual's response to traumatic experiences.

Other trauma qualities, such as the traumatic experience involving someone else's life-threatening, hopelessness, and horror, showed a significant difference in survivors' traumatic stress levels. Participants who experienced a trauma involving someone else's life-threatening, hopelessness and horror showed greater traumatic stress in accordance with the literature (Bond et al., 2021; Bovin and Marx, 2011). The intense emotional states of hopelessness and horror are not merely minor aspects of trauma; instead, they are fundamental to the development of post-traumatic stress disorder (PTSD). Research indicates that these feelings are powerful because they disrupt an individual's fundamental beliefs about safety, control, and predictability in life, and they are central to the development of PTSD (Blashfield et al., 2014). When individuals are exposed to circumstances that engender a sense of complete powerlessness and terror, their sense of security can be significantly compromised, thereby making recovery challenging and leading to prolonged stress responses.

4.4. Examination of the Relationship Between Trauma Exposure Time and Traumatic Stress

The literature has shown that there is a relationship between time of exposure to trauma and traumatic stress (Vang et al., 2019). There were significant differences between reported time intervals in the current study. However, there were no between-group differences with the current intervals (less than 1 month, 1-3 months, 3-6 months, 6 months to 3 years, 3-5 years, and more than 5 years). Hence, the trauma time intervals have been reorganized for 3 years (participants who were exposed to their trauma within 3 years and participants who were exposed to their trauma more than 3 years ago). Therefore, the

categorization of the time frame of the trauma was revised for more effective statistical analysis and group variances. Afterwards, an independent samples t-test was conducted. Participants who experienced the trauma within 3 years showed more traumatic stress than those who experienced the trauma more than 3 years ago. This finding is compatible with the literature; traumatic stress is more relevant for recent trauma exposure (Vang et al., 2019). Although resilience is frequently linked to swift recovery and adaptation following traumatic experiences (Snijders et al., 2018), it is crucial to recognize that it serves to mitigate, rather than eliminate, the impact of traumatic stress (Aburn et al., 2016). It is, therefore, the case that individuals typically exhibit traumatic stress in the aftermath of a traumatic event, which is referred to as an acute trauma response (Shand et al., 2014). Traumatic stress symptoms can even show in the long term to five years (Eekhout et al., 2016).

4.5. Examination of the Relationships Between Resilience-enhancing Features, Resilience, and Traumatic Stress

Although a comprehensive study encompassing all relevant variables may be lacking, studies have examined variables such as emotion regulation, cognitive flexibility, self-efficacy, and self-compassion separately as potential enhancers of resilience in the literature (Arici-Ozcan et al., 2019; Chen et al., 2022; Hu, 2023). Therefore, the current study expected a high correlation among these features to eventually make them a latent variable called “resilience-enhancers” in the current study. Subsequently, a correlation analysis was conducted to examine the relationships between emotion regulation, cognitive flexibility, self-efficacy, and self-compassion, and they had intermediate relationships among themselves. After completing the relational checks, a latent variable, designated as “resilience-enhancers,” was identified, signifying the resilience-enhancing features. As anticipated, all the features exhibited a considerable and elevated regression weight in their path to the latent variable, resilience-enhancers.

The current study found that resilience-enhancing features, such as emotion regulation, cognitive flexibility, self-efficacy, and self-compassion, positively predict resilience in accordance with the literature (Mestre et al., 2017; Scoglio et al., 2018), and resilience-enhancing features negatively predict traumatic stress in accordance with the literature (Moreno et al., 2020).

Emotion regulation is crucial for psychological resilience (Kay, 2016). The individual's emotional regulation skills after traumatic experiences are a protective factor for the severity of their reaction to the trauma (Troy, 2011). The current study found a positive relationship between emotion regulation and resilience and a negative relationship between emotion regulation and traumatic stress, which is consistent with the literature (Brites et al., 2023). The findings underscore the essential function of emotion regulation in enhancing psychological resilience and mitigating the consequences of traumatic stress. The effective management of emotions allows individuals to process and assimilate traumatic experiences in a manner that reduces the overall impact on their mental health.

Higher cognitive flexibility is positively related to resilience in the face of adversity (Rademacher et al., 2022). The current study found a positive relationship between cognitive flexibility and resilience in accordance with the literature (Ram et al., 2019) and a negative relationship between cognitive flexibility and traumatic stress in accordance with the literature (Ben-Zion et al., 2018). The ability to adapt to changing circumstances and change cognitive strategies helps individuals cope with traumatic events more effectively.

Individuals with higher self-efficacy may be more confident in their ability to handle stress and trauma, which, in turn, reduces the negative impact of these experiences. The current study found a positive relationship between self-efficacy and resilience in accordance with the literature (Cassidy, 2015); and a negative relationship between self-efficacy and traumatic stress in accordance with the literature (Luszczynska et al., 2009).

The concept of self-compassion, which encompasses self-kindness and non-judgmental attitudes toward oneself, has been identified as a protective factor against traumatic stress and a valuable coping resource in diverse contexts (Sirois et al., 2015). The current study found a positive relationship between self-compassion and resilience in accordance with the literature (Bluth et al., 2018) and a negative relationship between self-compassion and traumatic stress in accordance with the literature (Richardson et al., 2016). When individuals cultivate self-compassion through interventions and self-care practices, they can better manage trauma, mitigate the adverse effects of traumatic experiences, and improve their overall mental well-being and quality of life.

Resilience negatively predicted traumatic stress in the second model (Figure 3); however, this effect disappears when resilience-enhancers predict traumatic stress (Figure 2). The current study findings suggest that psychological resilience can predict traumatic stress when other resilience-enhancing features accompany it but remains weak and does not

predict when these features are absent. Both of the recent psychological resilience models in the literature, the Cognitive Model of Resilience (Parsons et al., 2016) and the Cognitive Appraisal Model of Resilience (Yao and Hsieh, 2019), suggested resilience as a cognitive system and an outcome including emotion regulation and cognitive flexibility, rather than being a fixed trait or an ability by itself. This is consistent with the knowledge that resilience works together with other features, as suggested by resilience models.

4.6. Limitations and Recommendations

Every measurement in this study, including the trauma information, is self-reported, and no clinical interviews or examinations were conducted during the data collection process. Self-report measurements are often more practical for use in applications due to their ease of administration and scoring. Detailed information about the type, qualities, and timing of the trauma was obtained in the current study. However, participants did not have the space to express their interpretation of the trauma, so further investigation could be conducted through clinical interviews rather than self-report to identify the source of traumatic stress and make associations. Therefore, clinical interviews and examinations would empower the current study.

The study excluded individuals with chronic PTSD and other significant mental disorders, thereby minimizing the impact of any prior dysfunction resulting from psychopathology. Literature indicates that a significant majority of individuals who develop PTSD across different age groups also have another mental disorder (Koenen et al., 2008). In such instances, people with one or more mental disorders may exhibit a diminished capacity to cope with traumatic experiences (Wu, 2024). Future research could investigate the study variables among individuals with mental disorders, exploring whether they function as a team akin to the resilience-enhancing features observed in this study.

Given the cross-sectional nature of this study, it is possible that different confounding variables may have been overlooked due to the various concepts related to trauma. Therefore, a longitudinal study is recommended, measuring traumatic stress and resilience enhancers at intervals after the period of trauma. Longitudinal studies would be beneficial in understanding the short and long-term effects of trauma and traumatic stress in accordance with resilience and resilience-enhancer features.

As previously stated in the discussion sections, the study variables were not tested with group comparisons in a manner that ensured equal distribution of the groups, resulting in an inability to achieve the desired between-group variance. Consequently, the reliability

of the analyses was compromised. This limitation underscores the importance of ensuring adequate sample sizes and balanced group comparisons in trauma research to capture the effects of different types of traumatic experiences accurately.

As the data collection process of the current study was initiated one year after the February 6 Kahramanmaraş earthquake, this social trauma was not considered a study variable. However, as a result of the discussion based on the findings obtained according to the types of trauma, it should be considered that this earthquake may have a confounding effect. Given that traumatic stress symptoms may manifest even five years after the trauma in some trauma types (Eekhout et al., 2016), it is recommended to gather data from participants for the purposes of control and comparison, even if the data is collected after a considerable interval following such social traumas.

Future research could examine the study variables in different populations and contexts to further validate and expand upon these findings.

4.7. Clinical Implications

The current study found a significant positive relationship between resilience-enhancing features and resilience, as well as a negative relationship between resilience-enhancing features and traumatic stress. This suggests that, in addition to their role in resilience, these resilience-enhancing features are also a vital component of the coping system in the context of trauma.

Prevention techniques and treatment methods aimed at resilience-enhancing features such as emotion regulation, cognitive flexibility, self-efficacy, and self-compassion can help individuals cope better with traumatic experiences and reduce traumatic stress or the risk of developing PTSD symptoms (Horn and Feder, 2018). The current interventions against PTSD can be enriched by modifying resilience-enhancing features in the prevention or treatment plan (Horn and Feder, 2018). Mental health professionals who work with individuals who have experienced trauma can integrate a range of strategies and personalized treatments to enhance resilience and potentially mitigate traumatic stress or strengthen coping mechanisms.

To sum up, by incorporating these findings into clinical practice, mental health experts can improve their capacity to assist individuals in coping with and overcoming the effects of traumatic stress, ultimately resulting in improved mental health and well-being. Continued research into the mechanisms of these factors and their impact on traumatic stress is necessary. Furthermore, clinicians must engage in continuous professional development

to remain up to date with the rapidly evolving field of psychological research and interventions. For example, advancements in understanding trauma-informed care and emotion regulation strategies can markedly enhance clinical practice. Clinicians trained in the latest methods are better equipped to tailor interventions to meet each patient's unique needs, thereby improving treatment outcomes. Furthermore, staying informed about evidence-based practices fosters a culture of lifelong learning and adaptability among healthcare professionals, which is crucial in addressing the diverse and complex needs of patients with traumatic stress.

4.8. Conclusion

In conclusion, the current study revealed significant information about traumatic stress and its predictors. Firstly, the relationship between sociodemographics and study variables was examined. Biological sex, education level, and evaluated income level showed significant relationships. Male participants showed higher cognitive flexibility than females. Bachelor students showed higher traumatic stress than graduate students. There was a significant relationship between evaluated income level and psychological resilience, but no between-group difference was found. Then, the correlation between variables was examined. In alignment with the existing literature and the methodology proposed by the study, moderate relationships were found between all variables. These relationships were then examined comprehensively using group comparisons and path analyses.

After finding significant relationships between study variables, the trauma's type, qualities, and time were examined for a better understanding of the trauma characteristics and their effects. In the comparison between trauma types (human-made traumas, natural disasters, cumulative traumas), it was found that survivors of human-made trauma exhibited lower resilience than survivors of cumulative trauma. There was a significant relationship between the trauma qualities and traumatic stress; participants reported higher traumatic stress in traumas involving threats to the lives of others, feelings of hopelessness, and horror. When the time frame of the trauma was examined, participants who experienced trauma in the last 3 years reported higher traumatic stress than those who experienced their trauma more than 3 years ago.

The current study revealed that the resilience-enhancing features, namely emotion regulation, cognitive flexibility, self-efficacy, and self-compassion, positively predicted psychological resilience. With its enhancing features, the predictive power of resilience predicts traumatic stress. However, when the resilience enhancers negatively predicted

traumatic stress, the predictive power of the resilience enhancers did not increase the predictive power of resilience on traumatic stress; hence, the predictive power of the resilience on traumatic stress was diminished. The findings indicate that resilience can predict traumatic stress when other resilience-enhancers accompany it. However, when these features do not contribute to the prediction power of resilience, it is diminished.

Resilience predicted traumatic stress with the effect of other empowerment features but not without the effect of empowerment features.

The current study examines the complex nature of traumatic stress, and it highlights the importance of a holistic approach to treatment. Mental health experts can better support individuals in managing and overcoming traumatic stress by focusing on resilience enhancers such as emotion regulation, cognitive flexibility, self-efficacy, and self-compassion. These findings provide a foundation for developing comprehensive, evidence-based interventions that address the diverse needs of individuals experiencing trauma, ultimately contributing to improved mental health and well-being.

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APPENDICES

APPENDIX 1: Informed Consent Form

Bu çalışma Başkent Üniversitesi Sosyal Bilimler Enstitüsü Klinik Psikoloji Tezli Yüksek Lisans Programı öğrencisi olan Psk. Büşra Kök tarafından Dr. Öğr. Üyesi Tuğba Uyar Suiçmez danışmanlığında yürütülmektedir. Çalışmanın amacı, geçmiş zorlu deneyimlerinizin etkilerini incelemektir. Bu doğrultuda 18 yaş üzerinde olan katılımcılara ihtiyaç duyulmaktadır. Elde edilecek veriler, bu çalışma kapsamında bilimsel yayınlar üretme sürecinde kullanılacaktır. Bu nedenle soruların tümüne içtenlikle cevap vermeniz büyük önem taşımaktadır. Araştırma sorularını dikkatli olarak okuduktan sonra yanıtlarınızı, soruların altında/yanında yer alan seçenekler arasından uygun olanı seçerek ya da açık uçlu sorularda sorunun altında bırakılan boşluğa yazarak belirtiniz.

Çalışmaya katılım isteğe bağlıdır. Katılımcılar, istedikleri anda çalışmayı yarıda bırakabilirler. Çalışmadaki her kişiye ait bilgi özeldir ve sadece bu çalışma kapsamında anonim olarak kullanılacaktır; üçüncü kişilerle paylaşılmayacaktır. Çalışma sonrasında formlar, etik kodlara uygun bir biçimde ve zamanda imha edilecektir.

Bu çalışma, araştırma konusunun doğası gereği kişiyi rahatsız edici sorular içerebilir. Eğer bu çalışmayı yaparken rahatsız hissederseniz ve psikolojik desteğe ihtiyaç duyarsanız adresinden, psikolojik desteğe yönlendirilmek amacıyla ulaşabilirsiniz.

Bu çalışmaya ilişkin bilgileri okudum ve anladım. İstedğim zaman çalışmadan çekilebileceğimi biliyorum. Çalışmaya tamamen gönüllü olarak katılmayı ve verdiğim bilgilerin herhangi bir kişisel bilgi içermeksizin bilimsel amaçlı yayınlarda kullanılmasını kabul ediyorum.

Evet Hayır

APPENDIX 2: Demographic Form

1. Yaşınız: ...
2. Biyolojik Cinsiyetiniz:
 Kadın Erkek Diğer (Belirtiniz.....)
3. En son mezun olduğunuz okul veya okumaya devam ediyorsanız okuduğunuz okul derecesi nedir?
 İlkokul Ortaokul Lise Lisans Lisansüstü
4. İçinde bulunduğunuz hanenin ya da bireysel gelir düzeyini nasıl tanımlarsınız?
 Düşük Orta Yüksek Yüksek
5. Medeni durumunuz:
 Evli Bekar
6. Herhangi bir fiziksel rahatsızlığınız var mı?
 Evet (Belirtiniz.....) Hayır
7. Herhangi bir ilaç kullanıyor musunuz?
 Evet (Belirtiniz.....) Hayır
8. Tanısını aldığınız herhangi bir psikiyatrik bozukluğunuz var mı?
 Evet (Belirtiniz.....) Hayır

APPENDIX 3: The Posttraumatic Diagnostic Scale

Foa, Cashman, Jaycox ve Perry (1997)

1. Bölüm

Birçok kişinin başından, hayatının herhangi bir döneminde, oldukça stresli ve travmatik bir olaygeçmiş ya da böyle bir olaya tanık olmuştur. Aşağıda belirtilen olaylar içinde, başınızdand geçen ya da tanık olduğunuz olayların HEPSİNİ yanındaki kutuyu işaretleyerek belirtiniz.

(1)	<input type="checkbox"/>	Ciddi bir kaza, yangın ya da patlama olayı (örneğin, trafik kazası, iş kazası, çiftlikkazası, araba, uçak ya da tekne kazası,)
(2)	<input type="checkbox"/>	Doğal afet (örneğin, deprem, kasırga, sel baskını)
(3)	<input type="checkbox"/>	Aile üyelerinden biri ya da tanıdığınız bir kişi tarafından cinsel olmayan bir saldırıya maruz kalma (örneğin, saldırıya uğrayıp soyulma, fiziksel bir saldırıya maruz kalma, silahlı saldırı, bıçaklanma ya da silahla rehin alınma)
(4)	<input type="checkbox"/>	Tanımadığınız biri tarafından cinsel olmayan bir saldırıya maruz kalma (örneğin, saldırıya uğrayıp soyulma, fiziksel bir saldırıya maruz kalma, silahlı saldırı, bıçaklanma ya da silahla rehin alınma gibi)
(5)	<input type="checkbox"/>	Aile üyelerinden biri ya da tanıdığınız bir kişi tarafından cinsel bir saldırıya maruz kalma (örneğin, tecavüz ya da tecavüze teşebbüs gibi)
(6)	<input type="checkbox"/>	Tanımadığınız bir kişi tarafından cinsel bir saldırıya maruz kalma (örneğin, tecavüzya da tecavüze teşebbüs gibi)
(7)	<input type="checkbox"/>	Askeri bir çarpışma ya da savaş alanında bulunma
(8)	<input type="checkbox"/>	18 yaşından daha küçük olduğunuz bir dönemde kendinizden 5 ya da daha büyükyaşta biriyle cinsel temas (örneğin, cinsel organlarla, göğüslerle temas gibi)
(9)	<input type="checkbox"/>	Hapsedilme (örneğin, cezaevine düşme, savaş esiri olma, rehin alınma gibi)
(10)	<input type="checkbox"/>	İşkenceye maruz kalma
(11)	<input type="checkbox"/>	Hayatı tehdit eden bir hastalık
(12)	<input type="checkbox"/>	Sevilen ya da yakın birinin beklenmedik ölümü
(13)	<input type="checkbox"/>	Bunların dışında bir travmatik olay
(14)		13. Maddeyi işaretlediyseniz aşağıda bu travmatik olayı belirtiniz.

2. Bölüm

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

<input type="checkbox"/>	Kaza (araba ya da iş kazası, gibi)
<input type="checkbox"/>	Doğal afet
<input type="checkbox"/>	Aile üyelerinden biri ya da tanıdığınız bir kişi tarafından cinsel olmayan bir saldırıyamaruz kalma
<input type="checkbox"/>	Tanımadığınız biri tarafından cinsel olmayan bir saldırıya maruz kalma
<input type="checkbox"/>	Aile üyelerinden biri ya da tanıdığınız bir kişi tarafından cinsel bir saldırıya maruz kalma
<input type="checkbox"/>	Tanımadığınız bir kişi tarafından cinsel bir saldırıya maruz kalma
<input type="checkbox"/>	Savaş
<input type="checkbox"/>	18 yaşından daha küçük olduğunuz bir dönemde kendinizden 5 ya da daha büyük yaştabiriyle cinsel temas
<input type="checkbox"/>	Hapsedilme
<input type="checkbox"/>	İşkenceye maruz kalma
<input type="checkbox"/>	Hayatı tehdit eden bir hastalık
<input type="checkbox"/>	Bunların dışında bir olay
(16) Yaşadığınız trafik kazası ne kadar zaman önce meydana geldi? (YALNIZCA BİRTANESİNİ daire içine alınız)	
1	1 aydan daha az
2	1-3 ay arası
3	3-6 ay arası
4	6 ay – 3 yıl arası
5	3-5 yıl arası
6	5 yıldan daha fazla

Aşağıdaki sorularda, Evet için E harfini Hayır için H harfini daire içine alınız.

(17)	E	H	Trafik kazasında fiziksel bir yara aldınız mı?
(18)	E	H	Kaza sırasında başka bir kişi fiziksel bir yara aldı mı?
(19)	E	H	Kaza sırasında hayatınızın tehlikede olduğunu düşündünüz mü?
(20)	E	H	Kaza sırasında başka bir kişinin hayatının tehlikede olduğunu düşündünüz mü?
(21)	E	H	Kaza sırasında kendinizi çaresiz hissettiniz mi?
(22)	E	H	Kaza sırasında büyük bir korku duygusu yaşadınız mı?

3.Bölüm

Aşağıda, insanların bazen bir kazanın ardından yaşadığı bazı sorunlar belirtilmiştir. Her maddeyi dikkatlice okuyun ve GEÇTİĞİMİZ AY (HAFTA) İÇİNDE bu sorunun sizi ne sıklıkta rahatsız ettiğini en iyi ifade ettiğini düşündüğünüz sayıyı (0, 1, 2 ya da 3) daire içine alın. Örneğin, söz ettiğiniz olay geçtiğimiz ay içinde aşağıda verilen sıkıntılar açısından sizi yalnızca bir kez rahatsız ettiyse 0'ı; haftada bir kez rahatsız ettiyse 1 işaretleyin. Aşağıda belirtilen olayla ilgili her sıkıntıyı yaşadığınız trafik kazası açısından değerlendiriniz.

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

(23)	0	1	2	3	Kaza hakkında, istemediğiniz halde aklınıza rahatsız edici düşünceler ya da imgelerin gelmesi
(24)	0	1	2	3	Kazayla ilgili kötü rüyalar ya da kâbuslar görme
(25)	0	1	2	3	Kaza anını yeniden yaşama, sanki tekrar oluyormuş gibi hissetme ya da öyle davranma
(26)	0	1	2	3	Kazayı hatırladığınızda duygusal olarak altüst olduğunuzu hissetme(örneğin, korku, öfke, üzüntü, suçluluk vb. gibi duygular yaşama)
(27)	0	1	2	3	Kazayı hatırladığınızda vücudunuzda fiziksel tepkiler meydana gelmesi(örneğin, ter boşalması, kalbin hızlı çarpması)
(28)	0	1	2	3	Kazayı düşünmemeye, hakkında konuşmamaya ya da hissetmemeye çalışma
(29)	0	1	2	3	Size kazayı hatırlatan etkinliklerden, kişilerden ya da yerlerden kaçınmaya çalışma
(30)	0	1	2	3	Kazanın önem taşıyan bir bölümünü hatırlayamama
(31)	0	1	2	3	Önemli etkinliklere çok daha az sıklıkta katılma ya da bu etkinliklere çok daha az ilgi duyma
(32)	0	1	2	3	Çevrenizdeki insanlarla aranızda bir mesafe hissetme ya da onlardan koptuğunuz duygusuna kapılma
(33)	0	1	2	3	Duygusal açıdan kendinizi donuk, uyuşuk hissetme (örneğin, ağlayamamaya da sevecen duygular yaşayamama)
(34)	0	1	2	3	Gelecekle ilgili planlarınızın ya da umutlarınızın gerçekleşmeyeceği duygusuna kapılma (örneğin, bir meslek hayatınızın olmayacağı, evlenmeyeceğiniz, çocuğunuzun olmayacağı ya da ömrünüzün uzun olmayacağı duygusu)
(35)	0	1	2	3	Uykuya dalma ya da uyumada zorluklar yaşama
(36)	0	1	2	3	Çabuk sinirlenme ya da öfke nöbetleri geçirme
(37)	0	1	2	3	Düşüncenizi ya da dikkatinizi belli bir noktada toplamada sıkıntı yaşama(örneğin, bir konuşma sırasında konuyu kaçırmama, televizyondaki bir öyküyü takip edememe,

					okuduğunuz şeyi unutma)
(38)	0	1	2	3	Aşırı derecede tetikte olma (örneğin, çevrenizde kimin olduğunu kontrolleme, sırtınız bir kapıya dönük olduğunda rahatsız olma, vb.)
(39)	0	1	2	3	Diken üstünde olma ya da kolayca irkilme (örneğin, birisi peşinizdenyürdüğünde)

(40) Yukarıda belirttiğiniz sorunları ne kadar zamandır yaşıyorsunuz?(<u>YALNIZCA BİR TANESİNİ</u> daire içine alınız)
a) Bir aydan daha az <input type="checkbox"/>
b) 1-3 ay arası <input type="checkbox"/>
c) 3 aydan daha fazla <input type="checkbox"/>

(41) Bu sorunlar yaşadığınız trafik kazasından ne kadar sonra başladı? (<u>YALNIZCA BİR TANESİNİ</u> daire içine alınız)
a) 6 aydan daha az <input type="checkbox"/>
b) 6 ay ya da daha fazla <input type="checkbox"/>

4.Bölüm

3. Bölüm'de işaretlediğiniz **sorunların** GEÇTİĞİMİZ AY (HAFTA) SÜRESİNCE hayatınızın aşağıda belirtilen alanlarından herhangi birini engelleyip engellemediğini belirtiniz. Evet için E harfini Hayır için H harfini daire içine alınız.

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

APPENDIX 4: Resilience Scale for Adults

1. Beklenmedik bir olay olduğunda...						
Her zaman bir çözüm bulurum						Çoğu kez ne yapacağımı kestiremem
2. Gelecek için yaptığım planların...						
Başarılması zordur						Başarılması mümkündür
3. En iyi olduğum durumlar şu durumlardır...						
Ulaşmak istediğim açık bir hedefim olduğunda						Tam bir günlük boş bir vaktim olduğunda
4. ...olmaktan hoşlanıyorum						
Diğer kişilerle birlikte						Kendi başıma
5. Ailemin, hayatta neyin önemli olduğu konusundaki anlayışı...						
Benimkinden farklıdır						Benimkiyle aynıdır
6. Kişisel konuları ...						
Hiç kimseyle tartışmam						Arkadaşlarımla/Aile- üeleriyle tartışabilirim
7. Kişisel problemlerimi...						
Çözemem						Nasıl çözebileceğimi bilirim

8. Gelecekteki hedeflerimi...						
Nasıl başaracağımı bilirim						Nasıl başaracağımdan emin değilim
9. Yeni bir işe/projeye başladığımda ...						
İleriye dönük planlama yapmam, derhal işe başlarım						Ayrıntılı bir plan yapmayı tercih ederim
10. Benim için sosyal ortamlarda rahat/esnek olmak						
Önemli değildir						Çok önemlidir
11. Ailemle birlikteyken kendimi ... hissederim						
Çok mutlu						Çok mutsuz
12. Beni ...						
Bazı yakın arkadaşlarım/aile üyelerim cesaretlendirebilir						Hiç kimse cesaretlendiremez
13. Yeteneklerim...						
Olduğuna çok inanırım						Konusunda emin değilim
14. Geleceğimin ... olduğunu hissediyorum						
Ümit verici						Belirsiz
15. Şu konuda iyiyimdir...						

Zamanımı planlama						Zamanımı harcama
16. Yeni arkadaşlık konusu ... bir şeydir						
Kolayca yapabildiğim						Yapmakta zorlandığım

17. Ailem şöyle tanımlanabilir ...						
Birbirinden bağımsız						Birbirine sıkı biçimde kenetlenmiş
18. Arkadaşlarımın arasındaki ilişkiler ...						
Zayıftır						Güçlüdür
19. Yargılarıma ve kararlarıma ...						
Çok fazla güvenmem						Tamamen güvenirim
20. Geleceğe dönük amaçlarım ...						
Belirsizdir						İyi düşünülmüştür
21. Kurallar ve düzenli alışkanlıklar ...						
Günlük yaşamımda yoktur						Günlük yaşamımı kolaylaştırır
22. Yeni insanlarla tanışmak ...						
Benim için zordur						Benim iyi olduğum bir konudur

23. Zor zamanlarda, ailem ...						
Geleceğe pozitif bakar						Geleceği umutsuz görür
24. Ailemden birisi acil bir durumla karşılaştığında...						
Bana hemen haber verilir						Bana söylenmesi bir hayli zaman alır
25. Diğerleriyle beraberken						
Kolayca gülerim						Nadiren gülerim
26. Başka kişiler söz konusu olduğunda, ailem şöyle davranır:						
Birbirlerini desteklemez biçimde						Birbirlerine bağlı biçimde
27. Destek alırım						
Arkadaşlarımdan/aile üyelerinden						Hiç kimseden
28. Zor zamanlarda ... eğilimim vardır						
Her şeyi umutsuzca gören bir						Beni başarıya götürebilecek iyi bir şey bulma
29. Karşılıklı konuşma için güzel konuların düşünülmesi, benim için ...						
Zordur						Kolaydır
30. İhtiyacım olduğunda ...						

Bana yardım edebilecek kimse yoktur						Her zaman bana yardım edebilen birisi vardır
31. Hayatımdaki kontrol edemediğim olaylar (ile) ...						
Başa çıkmaya çalışırım						Sürekli bir endişe/kaygı kaynağıdır
32. Ailemde şunu severiz ...						
İşleri bağımsız olarak yapmayı						İşleri hep beraber yapmayı
33. Yakın arkadaşlarım/aile üyeleri ...						
Yeteneklerimi beğenirler						Yeteneklerimi beğenmezler

APPENDIX 5: Emotion Regulation Skills Questionnaire

DDBÖ	Kod: _____	Yaş: _____
Duygu Düzenleme Becerileri Ölçeği	İş&Uğraşı: _____	Cinsiyet: _____

Değerli Katılımcı,

Aşağıda son bir hafta içerisinde yaşamış olabileceğiniz duygularla ilgili bazı ifadeler bulacaksınız. Lütfen, her bir ifadenin yanına size en uygun gelen cevabı işaretleyiniz. Lütfen ifadelerde çok zaman harcamayınız, aklınıza ilk gelen cevabı işaretleyiniz, aklınıza ilk gelen yanıt büyük olasılıkla en iyisidir.

Duygularla Baş Etme: Son bir hafta içerisinde...	Hiç 0	Nadiren 1	Bazen 2	Sık Sık 3	Nerede yse Her Zaman 4
1.)...Hissettiklerime bilinçli olarak dikkat edebildim.					
2.)... Bilinçli olarak olumlu hisler ortaya çıkarabildim.					
3.)... Duygusal tepkilerimi anladım.					
4.)... Olumsuz hislerime tahammül edebildim.					
5.)... Olumsuz hislerimi kabul edebildim.					
6.)...Hislerimi adlandırabildim.					
7.)...Hissettiklerimle ilgili net bir fiziksel algıya sahiptim.					

8.)... Olumsuz hislerle karşı karşıya kalacak bile olsam, ne yapmak istiyorsam onu yaptım.					
9.)... Sıkıntılı durumlarda kendime güvence vermeye çalıştım.					
10.)... Olumsuz hislerim üzerinde bir etki yaratabildim.					
11.)...Hissettiklerimin ne anlama geldiklerini biliyordum.					
12.)...Gerektiğinde olumsuz duygularıma odaklanabildim.					
13.)... Herhangi bir anda hangi duyguyu hissettiğimi biliyordum.					
14.)...Belli durumlardaki duygusal değişimlere karşı vücudumun gösterdiği değişiklikleri bilinçli olarak fark ettim.					
15.)...Duygusal olarak sıkıntılı olan durumlarda kendimi neşelendirmeye çalıştım.					
16.)...Olumsuz hislerime rağmen yapmak istediklerimi yaptım.					
17.)...Olumsuz olsalar bile hissettiklerimle aram iyiydi.					

18.)...Olumsuz hislerim yoğun olsalar bile onlara tahammül edebileceğimden emindim.					
19.)...Hislerimi bilinçli olarak deneyimleyebildim.					
20.)... Hissettiklerimin nedenlerinin farkındaydım.					
21.)... Hissettiklerimi etkileyebileceğim farkındaydım.					
22.)... Bunu yaparken olumsuz hislerimi tetikleyebileceğini veya yoğunlaştırabileceğini düşünmeme rağmen benim için önemli olan amaçlarımı sürdürdüm.					
23.)...Olumsuz hislerimi başımdan defetmeye çalışmadan deneyimleyebildim.					
24.)...Fiziksel duyumsamalarım nasıl hissettiğim iyi birer göstergesiydi.					
25.)... Hangi duyguları yaşadığım konusunda nettim.					
26.)...Olumsuz hislerimi tolere edebildim.					
27.)...Duygusal olarak sıkıntılı durumlarda kendi kendimi destekledim.					

APPENDIX 6: Cognitive Flexibility Inventory

Yönerge: Aşağıdaki ifadelerin size ne kadar uygun olduğunu göstermek için lütfen ifadelerin sağında yer alan ölçeği kullanınız.

Derecelendirme: 1. Hiç uygun değil, 2. Pek uygun değil, 3. Kararsızım, 4. Uygun, 5.

Tamamen uygun

	Hiç uygun değil 1	Pek Uygun Değil 2	Kararsızım 3	Uygun 4	Tamamen uygun 5
1 Durumları "tartma" konusunda iyiyimdir.					
2 Zor durumlarla karşılaştığımda karar vermekte güçlük çekerim.					
3 Karar vermeden önce çok sayıda seçeneği dikkate alırım.					
4 Zor durumlarla karşılaştığımda kontrolümü kaybediyormuşum gibi hissederim.					
5 Zor durumlara değişik açılardan bakmayı tercih ederim.					
6 Bir davranışın nedenini anlamak için önce, elimdeki dışında ek bilgi edinmeye çalışırım.					

7 Zor durumlarla karşılaştığımda öyle strese girerim ki sorunu çözecek bir yol bulamam.					
8 Olaylara başkalarının bakış açısından bakmayı denerim.					
9 Zor durumlarla baş etmek için çok sayıda değişik seçeneğin olması beni sıkıntıya sokar.					
10 Kendimi başkalarının yerine koymakta başarılıyım.					
11 Zor durumlarla karşılaştığımda ne yapacağımı bilemem.					
12 Zor durumlara farklı açılardan bakmak önemlidir.					
13 Zor durumlarda nasıl davranacağıma karar vermeden önce birçok seçeneği dikkate alırım.					
14 Durumlara farklı bakış açılarından bakarım.					
15 Hayatta karşılaştığım zorlukların üstesinden gelmeyi becerebili					

16 Bir davranışın nedenini düşünürken mevcut bütün bilgileri ve gerçekleri dikkate alırım.					
17 Zor durumlarda, şartları değiştirecek gücümün olmadığını hissedirim.					
18 Zor durumlarla karşılaştığımda önce bir durup çözüm için farklı yollar düşünmeye çalışırım.					
19 Zor durumlarla karşılaştığımda birden çok çözüm yolu bulabilirim.					
20 Zor durumlara tepki vermeden önce birçok seçeneği dikkate alırım.					

APPENDIX 7: General Self-efficacy Scale

Aşağıda çeşitli konulardaki düşüncelerinizi öğrenmek üzere cümleler verilmiştir. Cümlede geçen ifadenin sizi ne kadar tanımladığını, lütfen, size uygun olan bölme işaretleyiniz.

Sizi ne kadar tanımlıyor?

	Hiç 1	Az 2	Orta 3	İyi 4	Çok İyi 5
1. Planlar yaparken, onları hayata geçirebileceğimden eminimdir.					
2. Sorunlarımdan biri bir işe zamanında başlayamamamdır.					
3. Eğer bir işi ilk denemede yapamazsam başarıya kadar uğraşırım.					
4. Belirlediğim önemli hedeflere ulaşmada, pek başarılı olamam.					
5. Her şeyi yarım bırakırım.					
6. Zorluklarla yüz yüze gelmekten kaçınırım.					
7. Eğer bir iş çok karmaşık görünüyorsa onu denemeye bile girişmem.					

8. Hoşuma gitmeyen bir şey yapmak zorunda kaldığımda onu bitirinceye kadar kendimi zorlarım.					
9. Bir şey yapmaya karar verdiğimde hemen işe girerim.					
10. Yeni bir şey denerken başlangıçta başarılı olamazsam çabucak vazgeçerim.					
11. Beklenmedik sorunlarla karşılaştığımda kolayca onların üstesinden gelemem.					
12. Bana zor görünen yeni şeyleri öğrenmeye çalışmaktan kaçınırım.					
13. Başarısızlık benim azmimi artırır.					
14. Yeteneklerime her zaman çok güvenmem.					
15. Kendine güvenen biriyim.					
16. Kolayca pes ederim.					
17. Hayatta karşıma çıkacak sorunların çoğuyla baş edebileceğimi sanmıyorum.					

APPENDIX 8: Self-compassion Scale

Bu anketten elde edilen sonuçlar bilimsel bir çalışmada kullanılacaktır. Sizden istenilen bu ifadeleri okuduktan sonra kendinizi değerlendirmez ve sizin için en uygun seçeneğin karşısına çarpı (X) işareti koymanızdır. Her sorunun karşısında bulunan; (1) Hiç bir zaman (2) Nadiren (3) Sık sık (4) Genellikle ve (5) Her zaman anlamına gelmektedir. Lütfen her ifadeye mutlaka TEK yanıt veriniz ve kesinlikle BOŞ bırakmayınız. En uygun yanıtları vereceğinizi ümit eder katkılarınız için teşekkür ederim.

	Hiçbir zaman 1	Nadiren 2	Sık Sık 3	Genellikle 4	Her Zaman 5
S1.Bir yetersizlik hissettiğimde, kendime bu yetersizlik duygusunun insanların birçoğu tarafından paylaşıldığını hatırlatmaya çalışırım					
S2.Kişiliğimin beğenmediğim yönlerine ilişkin anlayışlı ve sabırlı olmaya çalışırım.					
S3.Bir şey beni üzdüğünde, duygularıma kapılıp giderim.					
S4.Hoşlanmadığım yönlerimi fark ettiğimde kendimi suçlarım.					
S5.Benim için önemli olan bir şeyde başarısız olduğumda, kendimi bu başarısızlıkta yalnız hissederim.					

S6.Zor zamanlarımda ihtiyaç duyduğum özen ve şefkati kendime gösteririm.					
S7.Gerçekten güç durumlarla karşılaştığımda kendime kaba davranırım.					
S8.Başarısızlıklarımı insanlık halinin bir parçası olarak görmeye çalışırım.					
S9.Bir şey beni üzdüğünde duygularımı dengede tutmaya çalışırım.					
S10.Kendimi kötü hissettiğimde kötü olan her şeye kafamı takar ve onunla meşgul olurum.					
S11.Yetersizliklerim hakkında düşündüğümde, bu kendimi yalnız hissetmeme ve dünyayla bağlantımı koparmama neden olur.					
S12.Kendimi çok kötü hissettiğim durumlarda, dünyadaki birçok insanın benzer duygular yaşadığını hatırlamaya çalışırım.					
S13.Acı veren olaylar yaşadığımda kendime kibar davranırım.					
S14.Kendimi kötü hissettiğimde duygularıma ilgi ve açıklıkla yaklaşmaya çalışırım					

S15.Sıkıntı çektiğim durumlarda kendime karşı biraz acımasız olabilirim.					
S16.Sıkıntı veren bir olay olduğunda olayı mantıksız biçimde abartırım.					
S17.Hata ve yetersizliklerimi anlayışla karşılarım.					
S18.Acı veren bir şeyler yaşadığımda bu duruma dengeli bir bakış açısıyla yaklaşmaya çalışırım.					
S19.Kendimi üzgün hissettiğimde, diğer insanların çoğunun belki de benden daha mutlu olduklarını düşünürüm.					
S20.Hata ve yetersizliklerime karşı kınayıcı ve yargılayıcı bir tavır takınırım.					
S21.Duygusal anlamda acı çektiğim durumlarda kendime sevgiyle yaklaşırım.					
S22.Benim için bir şeyler kötüye gittiğinde, bu durumun herkesin yaşayabileceğini ve yaşamın bir parçası olduğunu düşünürüm.					
S23.Bir şeyde başarısızlık yaşadığımda objektif bir bakış açısı takınmaya çalışırım.					

S24.Benim için önemli olan bir şeyde başarısız olduğumda, yetersizlik duygularıyla kendimi harap ederim.					
S25.Zor durumlarla mücadele ettiğimde, diğer insanların daha rahat bir durumda olduklarını düşünürüm.					
S26.Kişiliğimin beğenmediğim yönlerine karşı sabırlı ve hoşgörülü değilimdir.					

APPENDIX 9: Ethical Committee Approval

Evrak Tarih ve Sayısı: 19.02.2024-316686



T.C.
BAŞKENT ÜNİVERSİTESİ REKTÖRLÜĞÜ
Akademik Değerlendirme Koordinatörlüğü



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SOSYAL BİLİMLER ENSTİTÜSÜ MÜDÜRLÜĞÜNE

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Enstitünüz Psikoloji Ana Bilim Dalı öğretim üyesi, Dr. Öğretim Üyesi Tuğba Uyar Suiçmez danışmanlığında, Klinik Psikoloji (Tezli) Yüksek Lisans Programı öğrencisi Büşra Kök tarafından yürütülecek olan, "Resilience and Resilience-enhancing Characteristics of Emotion Regulation, Cognitive Flexibility, Self-efficacy, Self-compassion, and Their Prediction on Traumatic Stress" adlı çalışma değerlendirilmiş ve bilgilerinize ekte sunulmuştur.

Prof. Dr. Sadegül AKBABA ALTUN
Kurul Başkanı

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