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## 2023 Güneydoğu Türkiye Depremi Sonrası BDT Müdahalesi: Bir Vaka Çalışması

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**Özet:** Bu vaka çalışması, 2023 Güneydoğu Türkiye Depremi'nden sağ kurtulan bir bireyde Travma Sonrası Stres Bozukluğu (TSSB) tedavisinde Bilişsel Davranışçı Terapi'nin (BDT) etkinliğini araştırmaktadır. Çalışma, afet sonrası bir bağlamda uygulanan BDT'nin terapötik sürecine ve sonuçlarına detaylı bir bakış sunmayı amaçlamaktadır. Depremden ciddi TSSB semptomları yaşayan 38 yaşındaki kadın bir sağ kalan, Serpil (takma ad), sekiz haftalık özel olarak tasarlanmış BDT programına katılmıştır. Terapötik müdahaleler maruz kalma terapisi, bilişsel yeniden yapılandırma ve gevşeme tekniklerini içermiştir. Veri toplama, Klinisyen Yönetimli PTSD Ölçeği (CAPS) ve Beck Depresyon Envanteri (BDI) gibi niceliksel yöntemler kullanılarak, ayrıntılı terapi oturum notları ve Serpil'in kişisel yansımaları ile desteklenmiştir. Müdahale, Serpil'in TSSB semptomlarında, özellikle kabuslar ve geri dönüşlerin sıklığı ve şiddetinde önemli iyileşmeler sağlamıştır. Serpil, genel psikolojik dayanıklılığını ve işlevselliğini artıran gelişmiş başa çıkma mekanizmaları bildirmiştir. Veriler, CAPS ve BDI puanlarından doğrulanarak, Serpil'in zihinsel sağlığı ve yaşam kalitesinde genel bir iyileşme göstermektedir. Bu vaka çalışması, doğal afetlerden sağ kalanlar için TSSB yönetiminde BDT'nin potansiyel bir müdahale olarak öne çıktığını vurgulamaktadır. Afet yanıt girişimlerine psikolojik etkileri etkili bir şekilde ele almak için özelleştirilmiş psikoterapötik tekniklerin entegrasyonunun zorunluluğunu ortaya koymaktadır. Benzer müdahalelerin daha geniş uygulanabilirliğini doğrulamak ve tedavi protokollerini optimize etmek için çeşitli afet sonrası ortamlarda bu tür müdahalelerin daha geniş çapta uygulanması ve değerlendirilmesi önerilmektedir. Daha büyük örneklem boyutları ve daha uzun takip süreleri içeren ileri araştırmalar, BDT'nin afet mağduru popülasyonlarda uzun vadeli etkinliğini geliştirmek ve genelleştirmek için tavsiye edilmektedir.

**Anahtar Kelimeler:** TSSB, BDT, Deprem, Afet psikolojisi, Travma terapisi, Vaka çalışması

### CBT Intervention Post-2023 Southeast Türkiye Quake: A Case Study

**Abstract:** This case study investigates the effectiveness of Cognitive Behavioral Therapy (CBT) in treating Post-Traumatic Stress Disorder (PTSD) in an individual survivor of the catastrophic 2023 Southeast Türkiye Earthquake. The study aims to provide detailed insights into the therapeutic process and outcomes of CBT applied in a post-disaster context. A 38-year-old female survivor, pseudonymously named Serpil, participated in an eight-week structured CBT program specifically tailored to address her severe PTSD symptoms following the earthquake. The therapeutic interventions included exposure therapy, cognitive restructuring, and relaxation techniques. Data collection was achieved using quantitative methods such as the Clinician-Administered PTSD Scale (CAPS) and the Beck Depression Inventory (BDI), supplemented by qualitative assessments through detailed therapy session notes and Serpil's personal reflections. The intervention led to significant improvements in Serpil's PTSD symptoms, particularly a reduction in the frequency and severity of nightmares and flashbacks. Serpil reported enhanced coping mechanisms, which improved her overall psychological resilience and functionality. The data illustrate a notable decrease in PTSD symptomatology, corroborated by scores from CAPS and BDI, indicating an overall improvement in mental health and quality of life. This case study underscores the potential of CBT as a potent intervention for managing PTSD in survivors of natural disasters. It highlights the necessity of integrating specialized psychotherapeutic techniques in disaster response initiatives to address the psychological impacts effectively. The findings advocate for broader implementation and evaluation of similar interventions across diverse post-disaster

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settings to confirm these results and optimize treatment protocols. Further research with larger sample sizes and longer follow-up periods is recommended to enhance the generalizability and understanding of CBT's long-term effectiveness in disaster-stricken populations.

**Keywords:** PTSD, CBT, Earthquake, Disaster psychology, Trauma therapy, Case study

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## **Introduction**

Expanding upon the initial narrative to explore the comprehensive mental health impact of the 2023 Southeast Türkiye Earthquake, we will look into the immediate and long-term psychological effects on survivors, the challenges of mental health services in the aftermath, and the approaches taken to address the psychological needs of those affected.

In the early morning hours of February 6, 2023, the earth beneath southeastern Türkiye shuddered violently with a 7.7 magnitude earthquake centered in Pazarcık, Kahramanmaraş. This was followed by another devastating 7.6 magnitude aftershock, together compounding the destruction across 11 cities. The physical toll was immense: the Disaster and Emergency Management Presidency (AFAD) and the World Health Organization (WHO) reported a death toll exceeding 50,000 and significant infrastructure damage, plunging approximately 11 million people into a state of hardship.

The earthquakes not only demolished buildings but also the very fabric of communities, leading to widespread displacement, with three million individuals facing the brunt of this upheaval. The loss, dislocation, and the formidable challenge of rebuilding homes and lives created a milieu where the human spirit's resilience was severely tested. Amid the settling dust, the psychological repercussions began to surface, revealing an urgent need for mental health support.

The WHO highlighted the psychological stressors that were almost unimaginable for survivors, including children, many of whom exhibited signs of acute distress such as nightmares, aggression, or withdrawal. The mental health and wellbeing of 7 million children, in particular, are at risk for years to come, indicating a significant need for psychological interventions.

Despite the evident need, clinical trials and research focusing on the mental health of earthquake victims were startlingly scarce in the immediate academic and clinical discourse following the disaster. This gap in research and clinical attention meant that many individuals' psychological needs, such as those of Serpil, a survivor of the quake, were not adequately addressed. This oversight highlights a crucial area for improvement in disaster response strategies.

In the wake of such a large-scale calamity, the psychological well-being of survivors remains an area that requires urgent attention. The immediate physical injuries and the strain on healthcare services due to the disaster were severe. However, the deep psychological impact on survivors, which included

a range of mental health conditions such as PTSD, major depressive disorder, generalized anxiety disorder, and various phobias, cannot be overlooked.

This case study aims to bridge the gap in understanding by presenting an in-depth analysis of the psychological aftermath as experienced by individuals like Serpil. By examining her journey through the lens of CBT, we can chart a course of recovery that acknowledges the unique challenges faced by individuals navigating the aftermath of a disaster of an unimaginable scale. In doing so, it sheds light on the silent epidemic of post-traumatic stress that lingers long after the physical tremors have ceased.

The case of Serpil and others like her underscores the importance of early intervention and the provision of individualized therapeutic approaches. The insights gained from her experience can inform future interventions and support systems for those ensnared in the after-effects of such life-altering events. It is a call to action for the international community, mental health professionals, and policymakers to prioritize mental health as much as physical reconstruction in disaster response efforts.

Conclusively, the 2023 Southeast Türkiye Earthquake serves as a stark reminder of the critical importance of mental health care in disaster response. It emphasizes the need for immediate and sustained support for survivors, the integration of mental health services into the broader disaster management framework, and the value of research to inform and improve the psychological interventions provided in the wake of such tragedies. As the physical landscape of Southeast Türkiye is rebuilt, the psychological landscape requires equal, if not greater, attention to ensure the holistic recovery and resilience of its people.

### **Post Traumatic Stress Disorder**

Post-Traumatic Stress Disorder (PTSD) is an enduring and potentially severe psychological reaction to highly distressing events, such as earthquakes. The complexity of PTSD in the wake of such disasters is profound due to the unpredictable and uncontrollable nature of earthquakes, which often result in not only physical devastation but also deep psychological wounds. The sudden loss of loved ones, the destruction of homes, and the upheaval of life as it was known can leave survivors with a long-lasting sense of vulnerability and a disrupted sense of what was once considered normal. The psychological aftermath can manifest in various symptoms that cluster into four categories: intrusion, avoidance, negative alterations in cognition and mood, and alterations in arousal and reactivity (Tang et al., 2017).

Intrusive symptoms can include distressing memories, nightmares, and flashbacks of the quake, which are often intense and unbidden. Avoidance symptoms may manifest as an unwillingness to discuss the quake or engage with reminders of the event. Negative alterations in cognition and mood

can include feelings of hopelessness, persistent negative beliefs about oneself or the world, and memory problems. Alterations in arousal and reactivity may be characterized by heightened startle responses, irritability, aggression, reckless behavior, and difficulty sleeping or concentrating (Foreman & Hough, 1995).

The prevalence of PTSD among earthquake survivors can be staggering. Research has shown that PTSD rates can range from 26.4% to 55.6% seven to eight months post-earthquake, with one study revealing an incidence of 45.5% among residents near an earthquake site. These figures underscore the widespread nature of PTSD following such events (Dahal, Kumar & Thapa, 2018). In Peru, after major earthquakes like the 1999 Marmara earthquake (Bulut, 2021), the 2007 Pisco earthquake (Taucer, Alarcon & So, 2009) and another in 2021 in Piura (Valladares et al., 2022), high rates of PTSD were recorded, although more evidence is needed to strengthen interventions.

PTSD is the most commonly occurring mental health condition among earthquake survivors, with prevalence rates varying widely. This variability is influenced by numerous factors, including the severity of the event, personal injuries, loss of loved ones, property damage, and the level of support available post-disaster. Other risk factors include pre-existing psychiatric history, gender—with women being more susceptible—and age, with younger individuals typically at higher risk. A systematic review of research conducted after disasters over the past three decades also indicates that the burden of PTSD is substantial and is associated with a range of correlates, including sociodemographic factors, exposure characteristics, social support, and personality traits (Farooqui et al., 2017).

Research also indicates that the prevalence of PTSD can remain high even 20 months post-disaster. For instance, one study estimated the prevalence at 21.71%, with a consistent and graded association between exposure to the event, vulnerability factors (such as gender, age, exposure to death, and home damage), and PTSD symptoms. This highlights that the impact of the earthquake on mental health can persist well beyond the immediate aftermath and can be influenced by both the exposure to the traumatic event and the individual's vulnerabilities and coping mechanisms (Galea, Nandi & Vlahov, 2005).

The treatment for PTSD following earthquakes can involve various approaches, including but not limited to Cognitive Behavioral Therapy (CBT), which has been shown to be effective in treating PTSD symptoms. CBT typically involves helping individuals understand and change how they think about their trauma and its aftermath. Evidence-based CBT interventions may include exposure therapy, which involves facing one's fears by gradually confronting trauma reminders, cognitive restructuring to challenge and change unhelpful beliefs about the trauma, and stress inoculation training to teach coping skills to manage anxiety (Başoğlu, Livanou & Şalcıoğlu, 2003).

Given the complexity and individual variability in PTSD symptoms and recovery trajectories, treatment plans must be personalized and may require a multi-modal approach. This could involve combining psychotherapy with pharmacotherapy or integrating alternative treatments like electroacupuncture, which has shown potential as a complementary therapy alongside CBT. The goal is to provide a comprehensive treatment plan that not only addresses the symptoms of PTSD but also supports the individual's overall well-being and resilience (Galatzer-Levy et al., 2013).

### **Cognitive Behavioural Therapy**

Cognitive Behavioral Therapy (CBT) has undergone continuous evolution since its inception, adapting to meet the needs of those affected by various psychological disorders, including trauma from natural disasters such as earthquakes. With an emphasis on pragmatic and solution-focused strategies, CBT serves as a cornerstone in the psychological recovery following traumatic events. By establishing a therapeutic alliance built on trust, CBT therapists work with patients to identify and challenge maladaptive beliefs, particularly those linked with trauma, and to reframe them in a way that allows for more adaptive living (Fenn & Byrne, 2013).

Moreover, there have been efforts to maximize the efficacy of CBT by condensing it into a single session using an earthquake simulator, allowing for significant improvements in trauma-related stress through intensive exposure (Sijbrandij et al., 2007). This method has shown to be a promising avenue for delivering timely and efficient therapeutic interventions post-disaster.

The role of individual coping strategies and the overall efficacy of CBT has been underscored among younger demographics as well. Following the L'Aquila earthquake, CBT was instrumental in improving posttraumatic stress symptoms and psychological distress among adolescents seeking psychiatric care, highlighting its adaptability and effectiveness in a youth context (Kar, 2011).

Additionally, a variant of CBT, known as Control-focused Behavioral Treatment (CFBT), demonstrated significant results with just a single session, where survivors experienced a substantial reduction in posttraumatic stress symptoms. The incorporation of simulated earthquake tremors as part of treatment maximized the efficacy of this approach, suggesting that simulation-based exposure can be a potent addition to CBT (Başoğlu & Şalcıoğlu, 2011).

The versatility of CBT is further exemplified by its effectiveness across various cultural contexts. Iranian adolescents with posttraumatic symptoms showed significant benefits from CBT interventions, which speaks to the universal applicability of this therapeutic approach (Dragnus, 2013).

Initial sessions are crucial for building rapport and a therapeutic alliance. They involve psychoeducation about CBT and how it can address earthquake trauma. The therapist and patient

work together to develop a shared understanding of the patient's problems within a cognitive-behavioral framework (Fenn & Byrne, 2013).

The middle sessions are the heart of CBT, where the core work occurs. Here, therapists employ techniques such as cognitive restructuring to address maladaptive beliefs related to the earthquake. Survivors are guided to identify their automatic thoughts, particularly those that trigger stress responses, and are taught to challenge and reframe these thoughts in a more balanced and less distressing way (Beck, 2020).

Exposure therapy, a key component of CBT for trauma, may be integrated during these sessions. This can involve graded exposure to trauma reminders and, as recent studies have shown, can be augmented by the use of virtual reality or earthquake simulators, providing a controlled environment to face and process the traumatic event (Foa, Rothbaum & Furr, 2003a).

Concurrent with exposure, skills in relaxation and stress management are taught to help manage the physiological symptoms of anxiety and stress that often accompany post-traumatic reactions. Techniques such as deep breathing, progressive muscle relaxation, and mindfulness can be invaluable (Back et al., 2014).

Throughout the process, coping strategies are enhanced, and positive behaviors are encouraged. Behavioral activation is a common technique used to help survivors re-engage with life activities they may have been avoiding since the earthquake. Homework assignments between sessions are also common, designed to reinforce the skills learned in therapy (LiTz & SKALTErS-PEdnEAuLT, 2013).

The concluding sessions focus on relapse prevention. The therapist will work with the survivor to develop strategies to maintain the gains made during therapy and to handle potential future stressors or triggers related to the trauma. This phase may include developing an emergency action plan should symptoms re-emerge.

The session layout for CBT in the context of earthquake trauma is designed to be flexible and responsive to the individual needs of the survivor. While some may benefit from a brief, intensive approach, others may require a more prolonged treatment course to address complex or persistent symptoms.

## **Methods**

### **Participant**

The case study participant, referred to as Serpil to maintain confidentiality, is a direct survivor of the Great Southeast Türkiye Earthquake of 2023. Serpil, a pseudonym chosen by the participant, is a 38-year-old who experienced the loss of their residence and several family members during the disaster.

Prior to participation, Serpil provided informed consent and was selected based on a set of criteria that included directly experiencing the earthquake, being of adult age, and demonstrating initial signs of post-traumatic stress disorder (PTSD).

### **Procedure**

Serpil underwent a comprehensive psychological assessment before commencing CBT. This included a clinical interview, the administration of the Clinician-Administered PTSD Scale (CAPS), and the Beck Depression Inventory (BDI) to gauge baseline levels of trauma and depression. The CBT intervention for Serpil was structured to unfold over eight weeks, with weekly 50-minute sessions. The intervention was adapted to accommodate Serpil's acute trauma symptoms and was informed by established CBT protocols for PTSD (Lahad & Doron, 2010). The sessions were broken down as follows: Education and Rationale: Serpil was provided with education about PTSD and the rationale for CBT, establishing an understanding of how cognitive-behavioral techniques could alleviate symptoms. Cognitive Techniques: These sessions involved identifying and challenging maladaptive thoughts related to the earthquake, with an emphasis on reframing these thoughts to reduce emotional distress. Behavioral Techniques: Gradual exposure to trauma-related memories and stimuli was introduced to diminish avoidance behaviors and decrease PTSD symptoms. Relaxation and Stress Management: Serpil was trained in various relaxation techniques, including diaphragmatic breathing and progressive muscle relaxation, to manage acute stress responses. Homework Assignments: Between sessions, Serpil engaged in self-monitoring exercises and practiced skills learned during therapy.

### **Psychotherapist**

Psychotherapist was one of the authors MÇ. who has a MA in clinical psychology and PhD in psychology and he has been trained and practicing CBT for 20 years. MÇ used the manualized based CBT procedure (Milne & Reiser, 2017).

### **Data Collection**

Progress was monitored through weekly assessments utilizing the CAPS and BDI. Additionally, session notes were taken to track cognitive and behavioral changes, and a reflective journal kept by Serpil provided subjective insights into the personal experience of the therapy process.

### **Measuring Tools**

The Clinician-Administered PTSD Scale (CAPS), developed by Blake et al. (1995), is a key diagnostic tool for PTSD, aligning with DSM criteria. It evaluates symptoms through a structured interview, focusing on core PTSD features and their impact on functioning. Taking about an hour,

CAPS is detailed and nuanced, with its latest version, CAPS-5, reflecting the most current PTSD research. Known for its accuracy, it's widely used in research and clinical settings. The Turkish adaptation was conducted by Boysan et al. (2017).

The Beck Depression Inventory (BDI), created by Aaron T. Beck in 1987, is a 21-item self-report scale for evaluating depression severity. It measures various symptoms like mood, pessimism, and fatigue, with each item scored from 0 to 3. Higher total scores, which can range up to 63, indicate greater depression severity. The BDI-II, the latest version, is aligned with DSM criteria for depression. Widely used for its simplicity and effectiveness, it's validated for use in numerous settings, including research and clinical practice. Its Turkish reliability was established by Kapçı et al. (2008).

### **Ethical Considerations**

The study was approved by an institutional review board of İstanbul Nişantaşı University, and ethical considerations, especially those related to working with trauma survivors, were meticulously adhered to. Serpil's safety and psychological well-being were the foremost priority throughout the study.

### **Data Analysis**

Qualitative data from session notes and Serpil's journal were analyzed using thematic analysis to identify patterns relating to the CBT intervention's efficacy (Van Rooji et al., 2012). Quantitative data from the CAPS and BDI were used to assess changes in PTSD and depression symptoms across the intervention period. These data sets have been analyzed by the authors manually and added to overall estimation.

### **Case**

In the stillness before dawn on February 6, 2023, an earthquake of devastating magnitude struck southeastern Türkiye, tearing through the fabric of countless lives. Serpil's story, emerging from the chaos, is emblematic of the haunting ordeal faced by many.

The ground's violent upheaval that morning was a prelude to an enduring psychological storm. As the tremors subsided, the weight of the rubble that imprisoned Serpil became a crushing metaphor for the burgeoning pressure of trauma on her psyche. For four harrowing hours, she lay trapped, her cries for help mirroring the internal screams of a mind in the throes of acute stress.

Rescued by her brother, Serpil's physical extraction from the debris did not free her from the mental entrapment that ensued. The journey to medical care was marred by a lack of infrastructure, reflecting a system overwhelmed and a parallel to the subsequent feelings of abandonment that often accompany PTSD.



In the days following, as Serpil endured physical recovery, the psychological wounds began to manifest. The pervasive numbness in her feet extended to an emotional numbness, a common symptom of PTSD where survivors find themselves detached from the reality around them. The sanctuary they found was temporary, much like the fleeting moments of peace between waves of anxiety and fear.

As Serpil faced the success of her surgery, the physical scars were addressed, but the invisible injuries of her mind demanded a different kind of healing. The fear that had gripped her during the earthquake evolved into an enduring hyperarousal, a state of heightened alertness that left her scanning for signs of further disaster even in the safety of recovery.

Haunted by the memory of the earthquake, Serpil grappled with flashbacks that shattered her sense of time, pulling her back into the terror of that morning with visceral force. Sleep brought no respite, as nightmares replayed her entombment under the collapsed building, a common plight for those with PTSD who relive their trauma in dreams.

The loss of their home in Hatay—a place once synonymous with safety and comfort—compounded the psychological disarray. The ghost town it became stood as a stark symbol of the life they knew being irrevocably altered. Serpil, like many survivors, was left navigating a landscape of loss, where the familiar was rendered foreign, and the future uncertain.

Serpil's tale is one of survival, not just from the earthquake but from the onslaught of post-traumatic stress that followed. It is a testament to the insidious nature of PTSD, which lingers long after the physical dangers have passed, and highlights the essential need for mental health support in the aftermath of such disasters.

The resilience that Serpil and her family displayed in the face of their ordeal speaks to the indomitable human spirit. Yet, it also underscores the critical need for therapeutic interventions, community support, and a recognition of the long-term mental health needs that arise from surviving a disaster of such magnitude.

As Serpil continues to rebuild her life, her journey reflects the experiences of many who face the invisible aftermath of PTSD. It is a poignant reminder that the path to healing is not only about repairing broken structures but also about addressing the deep psychological impacts of those who have lived through the trembling of the earth.

## **Psychotherapy**

In the wake of the devastating earthquake, Serpil embarked on a therapeutic journey to navigate the treacherous waters of PTSD with her therapist. They began by establishing an understanding of

PTSD, identifying its symptoms like flashbacks and nightmares, which Serpil painfully recognized in her own life. Through the lens of the cognitive triangle, they explored the interconnectedness of thoughts, feelings, and behaviors, revealing how sudden noises could trigger panic and a desperate flight—a manifestation of her heightened anxiety. The sessions progressed to uncover cognitive distortions, where Serpil's pervasive fear that she would never again feel safe came to light, reflecting a common post-traumatic thought pattern. Exposure therapy gently steered her to confront these fears, providing a controlled environment to lessen the power of her traumatic memories. The transformative power of cognitive restructuring was harnessed to reframe Serpil's despondent outlook into one of cautious optimism, while grounding techniques provided her with a toolkit to combat overwhelming emotions and flashbacks, rooting her in the present moment. Recognizing triggers allowed Serpil to develop strategies for facing potential stressors, empowering her with a sense of preparedness. As the sessions unfolded, reflective discussions highlighted Serpil's progress, nurturing a burgeoning hope and equipping her with the emotional resilience to face her ongoing recovery with a newfound sense of strength and capability. Each session contributed to a tapestry of healing, a testament to the efficacy of structured, empathetic intervention in the shadow of trauma.

## **Sessions**

### Session 1: Understanding PTSD

Therapist (T): "Serpil, let's discuss what PTSD is. It stands for Post-Traumatic Stress Disorder, which can manifest after experiencing severe trauma like you have. It's a complex emotional response. Do any of these symptoms resonate with you: flashbacks, nightmares, heightened anxiety?"

Serpil (S): "I've been having nightmares almost every night. And sometimes during the day, I feel like I'm back beneath the rubble, even if just for a second."

Explanation (E): The therapist introduces the concept of PTSD, setting the groundwork for therapy. Serpil's acknowledgment of her symptoms such as nightmares and flashbacks is critical as it helps the therapist gauge her awareness and the severity of her PTSD. The identification of these symptoms is the first step towards a targeted treatment plan (Monson & Friedman, 2006).

### Session 2: The Cognitive Triangle

T: "Our thoughts, feelings, and behaviors are all interconnected. Imagine a triangle with each corner representing one of these elements. Can you think of a recent incident where a thought influenced how you felt or behaved?"

S: "The other day, I heard a loud noise, and I immediately thought it was another quake. I felt sheer panic and ran out of the room."

E: By introducing the cognitive triangle, the therapist helps Serpil see the connections between her thoughts, feelings, and behaviors, which is foundational for subsequent CBT sessions. This cognitive-behavioral framework will be essential for helping her understand and manage her reactions to certain triggers (Assigana et al., 2014).

### Session 3: Identifying Cognitive Distortions

T: "Often after traumatic events, our mind leans toward negative patterns. For example, believing 'It's always going to be this way.' Can you recall any such thoughts?"

S: "I often think that I'll never feel safe again, no matter where I am."

E: Highlighting cognitive distortions, the therapist helps Serpil recognize how her thoughts may be skewed by the trauma. Identifying them is the first step to challenging and changing them, which is crucial in the recovery from PTSD (Yurica & DiTomasso, 2005).

### Session 4: Exposure Therapy

T: "Today, if you're ready, let's try to revisit that day. Remember, you're safe here with me, and we'll go at your pace."

S: "It's hard, but I want to try. Maybe it'll help reduce the nightmares."

E: Exposure therapy is a key CBT component for PTSD, helping clients confront and reduce the power of their traumatic memories. The therapist ensures Serpil feels safe and in control during the process, gradually desensitizing her to the traumatic memory and reducing its emotional impact (Foa, Rothbaum & Furr, 2003b).

### Session 5: Challenging Negative Thoughts

T: "When you think 'I'll never feel safe again,' how does that make you feel?"

S: "Hopeless. Like there's no future for me."

T: "What if we changed that thought to 'I don't feel safe right now, but with time and support, I can find safety again?'"

S: "It sounds more hopeful, for sure."

E: Here, the therapist uses cognitive restructuring to help Serpil reframe her negative thoughts. This technique helps to modify her thought patterns, thereby influencing her emotional response and potentially reducing feelings of hopelessness and fear (Longmore & Worrell, 2007).

### Session 6: Grounding Techniques

T: "When you're feeling overwhelmed, grounding techniques can bring you back to the present. Let's try one: name five things you can see, four you can touch, three you can hear, two you can smell, and one you can taste."

S: "This does help me feel more present and less trapped in my memories."

E: Grounding exercises are effective coping tools for managing flashbacks and dissociative symptoms that are common in PTSD. They help the client stay anchored in the present, providing a sense of control and reducing the intensity of traumatic flashbacks (Bartanian, 2019).

#### Session 7: Preparing for Triggers

T: "It's vital to recognize what might trigger your PTSD symptoms. Can you think of any?"

S: "Loud noises, being in confined spaces, and even the dark, sometimes."

E: Recognizing triggers is a critical step in PTSD management. It helps Serpil anticipate and prepare for potential stressors, allowing her to use coping techniques proactively. The therapist works with her to develop a 'trigger plan,' which includes specific strategies to manage these triggers when they occur (Ehlers & Clark, 2008).

#### Session 8: Reflecting on Progress

T: "Looking back, how do you feel about the progress we've made together?"

S: "I'm beginning to see a way forward. It's not easy, but I feel more equipped to handle my emotions now."

E: Reflection is important for acknowledging progress, validating feelings, and reinforcing the skills learned in therapy. This retrospective view helps to boost Serpil's confidence in her ability to manage her symptoms and fosters a sense of achievement in the work done so far (Stein & Rothbaum, 2018).

### **Thematic Findings**

#### **Theme 1: Alleviation of PTSD Symptoms**

**Findings:** The participant, Serpil, reported a notable decrease in PTSD symptoms, particularly in the frequency and intensity of nightmares and flashbacks. Initially, Serpil experienced nightmares several times a week. Through the application of CBT, especially exposure therapy and cognitive restructuring, these were reduced to less than once a week by the end of the treatment period.

**Example:** "By the sixth session, Serpil expressed feeling more in control during episodes that previously triggered flashbacks, noting, 'I can now pause and remind myself where I am, that I am safe.'"

#### **Theme 2: Enhanced Coping Strategies**

**Findings:** Throughout the CBT sessions, Serpil developed stronger coping mechanisms to manage acute stress and anxiety. Techniques such as diaphragmatic breathing and progressive muscle relaxation were introduced and practiced. Serpil reported these techniques as 'lifesavers' during moments of heightened stress.

**Example:** "In our fourth week, Serpil successfully applied relaxation techniques during a particularly stressful anniversary of the earthquake, which she had been dreading."

### **Theme 3: Challenges in the Therapeutic Process**

**Findings:** Serpil faced several challenges throughout her therapy, including initial resistance to discussing deeply traumatic events and skepticism towards the efficacy of CBT. However, with consistent support and gradual building of therapeutic rapport, these barriers were progressively overcome.

**Example:** "Midway through the treatment, Serpil was reluctant to engage in exposure therapy. However, after adjusting the pace of exposure and increasing the emphasis on safety and control, she began to participate more fully."

### **Theme 4: Support Systems and Therapy Success**

**Findings:** The role of Serpil's support system, particularly her brother and close friends, was crucial in her therapeutic journey. The presence of a supportive and understanding social network appeared to enhance her engagement with therapy and bolster her resilience.

**Example:** "Serpil noted during session five, "Talking to my brother after our sessions makes me feel less alone with my fears. He helps me see my progress."

## **Discussion**

Serpil's story begins in the aftermath of the Great Southeast Türkiye Earthquake of 2023, a catastrophic event that not only shattered the landscape but also the mental fortitude of its survivors. As a case study, Serpil's experience with PTSD offers a vivid insight into the psychological trauma that natural disasters can inflict.

The prevalence of PTSD among earthquake survivors is well-documented, with a multitude of studies indicating it as the most common mental health condition in such contexts. The variability in prevalence rates is indicative of the complex interplay between the severity of the disaster's impact and the diverse coping mechanisms of individuals. Serpil's symptoms, including heightened alertness to noises reminiscent of the earthquake and distressing nightmares, echo the experiences reported in the literature.

The journey through PTSD is often long and fraught with challenges. Serpil's recurrent nightmares of being trapped under debris and her acute responses to triggering noises paint a vivid picture of the disorder's intrusive nature. Such symptoms can be debilitating, disrupting daily functioning and overall quality of life.

CBT stands as a beacon of hope for many. This therapeutic modality, grounded in the restructuring of cognitive patterns and the establishment of a supportive therapeutic relationship, has been extensively researched and applied in the treatment of PTSD. The approach centers on understanding and changing the thought processes that lead to maladaptive behaviors and emotional distress. Serpil's breakthrough in CBT—challenging the belief of being "forever broken"—illustrates the transformative potential of cognitive restructuring. Through this process, she began to reclaim her identity as a survivor, not a victim, of the earthquake.

The integration of graded exposure techniques in CBT is particularly effective for addressing the vivid, intrusive memories associated with PTSD. By gradually confronting these fears in a controlled environment, Serpil was able to decrease her physiological and emotional reactions to the traumatic memories. This method echoes the broader research advocating for exposure-based interventions as a cornerstone in PTSD treatment.

Resilience emerges as a key theme in PTSD recovery. The differential impact of earthquake exposure on individuals with varying levels of resilience underscores the necessity of personalized therapeutic plans. Serpil's resilience and the coping strategies developed through CBT were instrumental in her recovery, suggesting that individualized treatment is paramount.

The persistence of PTSD symptoms, as indicated by research showing a significant prevalence rate even 20 months post-disaster, speaks to the chronic nature of the condition for many survivors. Serpil's account of her continuing struggle with occasional sadness and anxiety, particularly around the anniversary of the earthquake, is a stark reminder of the enduring impact of such traumatic events.

Community and familial support play a crucial role in the healing process, as evidenced by Serpil's narrative. Her younger brother's unwavering support was a source of strength and stability, reinforcing the significance of social support systems in facilitating recovery from PTSD.

Despite the progress made, Serpil's story is far from over. Her ongoing experiences of unexpected emotional episodes are indicative of the long-term nature of PTSD recovery. The coping mechanisms and resilience she has developed through CBT provide her with the tools to navigate these challenges with greater efficacy.

The insights from Serpil's case resonate with the broader research on earthquake-induced trauma, emphasizing the complex and multifaceted nature of PTSD. It brings to light the importance of early

and tailored interventions, the value of a strong support network, and the potential for recovery and growth. Serpil's narrative embodies the resilience of the human spirit and offers hope that with comprehensive care, individuals can rebuild their lives in the aftermath of profound trauma.

In summary, the case of Serpil underscores the critical need for immediate and sustained psychological support following natural disasters. It highlights the importance of a multi-modal treatment approach that incorporates both evidence-based therapies and alternative treatments to address the unique needs of each survivor. The story of Serpil's resilience and recovery stands as a testament to the power of targeted therapy and the human capacity for healing and growth.

### **Limitations of the Study**

**Single Case Study Design:** The findings of this study are based on a single participant, which limits the generalizability of the results. While the detailed exploration of Serpil's experience provides in-depth insights into the therapeutic process and its outcomes, these results cannot be assumed to apply universally to all individuals affected by similar traumatic events. Future studies could benefit from including a larger sample size to validate the efficacy of CBT across a more diverse population.

**Lack of Control Group:** This case study did not include a control group, which restricts the ability to definitively attribute observed improvements in PTSD symptoms to the CBT intervention alone. Other factors, such as natural recovery over time or external support systems, may also have contributed to the outcomes observed. Comparative studies involving control groups undergoing different treatment modalities or no treatment would provide stronger evidence of the specific effects of CBT.

**Short-Term Follow-Up:** The follow-up period in this study was relatively short, which limits understanding of the long-term sustainability of the therapeutic gains made by Serpil. PTSD is a condition that can have fluctuating symptoms over time, and the long-term effectiveness of the intervention remains uncertain. Future research should include extended follow-up periods to assess the durability of treatment effects and the potential need for ongoing support or booster sessions.

**Subjective Measures of Success:** The primary outcomes of this study were measured through self-reported instruments and clinical observations, which may introduce subjectivity into the results. Although these tools are valuable for understanding the participant's perspective, they are inherently subjective and can be influenced by various factors, including the participant's current mood or the therapeutic relationship. Incorporating more objective measures, such as physiological indicators of stress or standardized diagnostic interviews conducted by independent clinicians, could enhance the reliability of the findings.

**Cultural and Contextual Factors:** The study was conducted in a specific cultural and post-disaster context, which might influence the applicability of the findings to other settings. Cultural beliefs about mental health and the stigma associated with seeking therapy can significantly affect the therapy process and outcomes. Additionally, the unique stressors faced by survivors of the Southeast Türkiye Earthquake may not be directly comparable to those experienced in other disaster scenarios. Future studies should consider the cultural and contextual nuances that may impact the generalizability and effectiveness of CBT interventions.

### **Suggestions for Clinical Practice**

For a clinical psychologist managing PTSD cases like Serpil's with a focus on CBT, it is imperative to create a multi-faceted treatment plan. Begin with psychoeducation to establish a foundational understanding of PTSD and its symptoms. Incorporate techniques such as the cognitive triangle to help patients draw connections between their thoughts, emotions, and behaviors, thereby gaining insight into their reactions to various triggers. Employ cognitive restructuring to challenge and modify maladaptive beliefs, and utilize exposure therapy to confront and diminish the power of traumatic memories. Grounding techniques can be integrated to manage acute distress and disassociation. Regularly revisit and adapt the treatment plan based on the patient's evolving needs and progress, ensuring a collaborative and responsive therapeutic process. It's also beneficial to engage in continuous professional development to stay abreast of the latest CBT advancements for PTSD.

### **Conclusion**

This case study has explored the profound psychological impacts of the 2023 Southeast Türkiye Earthquake on Serpil, a direct survivor, and illustrated how CBT can be instrumental in addressing the resultant PTSD. Serpil's journey through CBT highlighted significant improvements in her ability to manage symptoms such as flashbacks, nightmares, and heightened anxiety, underscoring the potential of targeted psychological interventions in post-disaster settings.

The efficacy of CBT in this context reveals its adaptability and relevance in treating trauma-related disorders, especially when tailored to meet the specific needs of individuals affected by catastrophic events. The intervention not only helped alleviate PTSD symptoms but also equipped Serpil with coping strategies that enhanced her resilience and psychological well-being. Moreover, the case underscores the importance of support systems and the therapeutic alliance, which were pivotal in facilitating Serpil's progress.

Despite the study's limitations, including its focus on a single participant and lack of a control group, the findings contribute valuable insights into the specific challenges and therapeutic needs following



a major disaster. These insights underline the necessity for healthcare systems to integrate mental health services into their emergency response strategies effectively.

Future research should aim to expand on these findings with larger participant groups to enhance the generalizability of the results. Additionally, longitudinal studies are needed to assess the long-term effectiveness of CBT post-disaster and to explore the potential benefits of integrating other therapeutic approaches.

Ultimately, this study calls attention to the critical need for immediate and sustained psychological support for disaster survivors. It advocates for a more comprehensive approach to disaster response that equally prioritizes mental health alongside physical rehabilitation. As we advance, it is crucial that we continue to develop and refine intervention strategies that not only address immediate trauma but also support the enduring journey towards recovery and resilience.

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