

REDUCING PTSD SYMPTOMS IN CHILDREN: THE ROLE OF THE FLASH TECHNIQUE IN TRAUMA RECOVERY

Selin Yılmaz

Bingol University Faculty of Arts and Sciences

Abstract: Childhood trauma is a global public health concern, with substantial prevalence and severe consequences for mental health. This abstract summarizes the alarming statistics provided by the World Health Organization (WHO) regarding physical and sexual abuse among women and adolescents. It highlights that childhood traumas contribute significantly to psychological and neurological disorders, accounting for a substantial burden of disease worldwide. A specific focus is placed on childhood traumas' link to various mental disorders, including dissociation, Post Traumatic Stress Disorder, psychotic disorders, depression, bipolar disorder, and psychosis. The abstract underlines the gravity of childhood traumas and their far-reaching implications for individuals' mental well-being.

Keywords: Childhood trauma, mental disorders, psychological diseases, public health, global burden

Introduction

According to World Health Organization data, one out of every 10 women who are aged 15 and over has been physically and/or sexually abused by their partners, and almost one-quarter of adolescent girls who are aged 15-19 (24%) are physically and/or sexually abused by someone whom they have never met in their lifetime (WHO, 2022). One billion people have psychological, neurological, and substance use disorders worldwide, including psychological diseases as a result of the traumatic experiences of children, which accounts for 10% of the global burden of disease and 25% of psychological disorders in 2019 (Global Health Estimates, 2019). In a study conducted on the prevalence of childhood traumas in Turkey, the prevalence of childhood traumas was reported as 74.2%. All these data show the seriousness of childhood traumas. Previous studies show that childhood traumas are a risk factor for various mental disorders including dissociation (Şar et al., 2007; Van der Hart et al., 2011), Post Traumatic Stress Disorder (Cloitre, 2009; Kessler, 2017), psychotic disorders (Croft et al., 2019; Schäfer & Fisher, 2022; Trotta et al., 2015), depression (Yap et al., 2014; Watters, Aloe & Wojciak, 2023), bipolar disorder (Marangoni et al., 2016), and psychosis (Fusar-Poli, 2017).

It was reported that childhood traumatic events cause long-term psychological effects contributing to the development of complicated post-traumatic sequelae, which are referred to as classic Post-Traumatic Stress Disorder (PTSD) or Complex Post-Traumatic Stress Disorder (CPTSD) (Musisi & Kinyanda, 2020). It is emphasized that childhood trauma, dissociation and PTSD are three psychiatric disorders that often coexist and interact (Ertek, 2022).

The DSM-5 defines dissociation as “A disruption and/or discontinuity in the normal integration of consciousness, memory, identity, emotion, perception, body representation, motor control and behavior” (American Psychiatric Association, 2013, p. 291).

The three most common and well-known dissociative disorders are Dissociative Identity Disorder, Depersonalization Disorder (DDD; renamed Depersonalization / Derealization Disorder in the DSM-5 without substantive changes in diagnostic criteria), and Dissociative Amnesia (Simeon & Putnam, 2022). Dissociative symptoms have the potential to give rise to marked psychopathology and to disrupt every area of psychological functioning. It is stated that the focus of studies examining the aetiology of dissociation have centered on trauma, neglect, and attachment style. Therefore, the identification of dissociation is crucial as people with dissociative disorders generally present with severe mental health struggles, complex emotional, social, and physical health difficulties, impaired functioning, and a poor quality of life (Kate et al., 2023).

Stating that the consequences of early and continuous exposure to childhood traumas are not only limited to post-traumatic stress disorder, but also commonly associated with dissociation or dissociative symptoms, Van der Hart et al states in the structural dissociation theory that the personality of highly traumatized individuals, each of which preserves its own basic psychobiology, is divided into parts that coexist and change (Van der Hart et al., 2011). It was argued that this theory explains all traumatization-related psychiatric disorders, including PostTraumatic Stress Disorder, somatoform, dissociative disorders, and borderline personality disorders. It was reported that there are important relationships between different childhood traumas and the development of dissociative symptoms, especially in studies published in 2007 and the decade before. In this respect, it was argued that childhood traumas such as emotional abuse, sexual abuse, and physical abuse are associated with the presence of dissociative pathology in women in the general population (Gewirtz-Meydan & Godbout, 2023; Ródenas-Perea et al., 2023; Şar et al., 2007).

Psychological diseases are conceptualized as interactive symptoms in which one symptom triggers another in a causal chain (Borsboom, 2017). Negative childhood experiences such as child abuse and neglect, mental illness in the family, having a family member incarcerated, and violence directed toward a parent can persist into adulthood. It is also known that these experiences have a negative effect on the well-being of the individual in adulthood. Although there are difficulties for psychological healthcare staff about which symptoms to target first regarding patients with comorbidities, it is already known that study any remembered childhood trauma also reduces the symptoms of other comorbid diseases, and sometimes even the symptoms disappear (Ertek, 2022). It can also be argued that the Flash Technique (FT), which is one of the psychotherapy techniques developed recently, is an important intervention technique in this respect.

FT was first developed as a protocol to quickly bring down the emotional distress of a traumatic memory during the preparation phase of eye movement desensitization and reprocessing (EMDR) therapy, so that EMDR could proceed. While working with this technique, it starts with asking how much the traumatic memory to be studied disturbs the client. The desensitization process begins with the determination of the traumatic memory to be scored out of 10. The intensity of the trauma memory is assessed at the beginning of the session with an Subjective Units of Distress (SUD). The client is then advised to get into a neutral or resourced state; the latter is something that gives the client a feeling of calmness or wellbeing. Then slow bilateral stimulation (BLS) is applied, whilst guiding the client to alter their blinking. The recommended rate of BLS is 2–3 seconds per each eye movement pass (left-right-left), and a full Flash set is usually 4–5 passes. They will need several sets to reduce the intensity of the memory. The therapist says, “Flash” at intervals during the BLS, to indicate that it is time to quickly blink three times (Shebini, 2019).

The Flash Technique is a short therapeutic intervention technique targeting quick and effective alleviation of the distress of a disturbing memory (Manfield et al., 2017). The main characteristic of this technique is that clients engage in positive imagery (for example, a memory of a vacation, a woodland, a loved one, or a favorite movie) without exposing and re-enacting the targeted traumatic memory. More specifically, clients are asked to reflect briefly on the targeted memory in a session (usually, this does not exceed 5 seconds) and rate their discomfort with the memory. Positive imagery is combined with repetitive blinks and leg taps under the direction of the therapist. The intervention process, which takes 20 minutes on average. This technique was originally developed as a type of “titration technique” to be employed in early phases of Eye Movement Desensitization and Reprocessing (EMDR) therapy. Currently, the Flash Technique is referred to as a stand-alone trauma treatment technique (Manfield et al., 2021). However, it can also be used with the Standard EMDR Protocol.

Several scientific, peer-reviewed studies were conducted on the clinical efficacy and safety of the Flash Technique. The first study consisted of four case studies in which the technique was used as a preparation for EMDR therapy (Manfield, 2017) and was administered by four different therapists to their clients who met the diagnostic criteria for PTSD. In the process of applying the technique, it is reported to result in a decrease in the deterioration of the targeted aversive memory and the avoidance of the traumatic memory.

In a group practice study conducted by Yaşar et al. (2019), significant differences were reported between the pretest (Incidents' Effects Scale (IES) and PTSD Checklist for DSM-5-PCL-5), the post-test after the procedure, and one month follow up after the implementation. In another study by the same author, it has been clearly shown that the application of EMDR Flash technique in individuals who are emotionally affected by traffic accidents is effective in improving symptoms such as anxiety, intrusion, avoidance, total traumatic stress, and mood quality (Yaşar et al., 2022). Another case study described the Flash Technique applied as group therapy for the treatment of multiple disturbing memories among individuals with PTSD-related and dissociative symptoms on memory recall in a homeless shelter (Wong, 2019). The results revealed substantial decrease in self-reported PTSD symptoms, subjective distress, and depression and dissociation symptoms. The study focused on the childhood traumas experienced by the participants rather than dissociative identity disorder. In addition, although no dissociative identity disorder was found in the anamnestic interview with the participants in the study, it was determined that they got high scores in the Dissociation Questionnaire (DIS-Q). After the application, it was observed that the high scores of the participants in the Dissociation Questionnaire (DIS-Q) scale decreased. After a Flash Technique application study on trauma and depression, it was stated that there was a great reduction in dissociation symptoms (Wong, 2019). In a group intervention study examining the effects of Flash technique on adolescents' post-traumatic stress levels, test anxiety levels and depression levels, it was determined that the technique had a significant effect on reducing post-traumatic stress levels, test anxiety levels and depression levels (Avcı, 2023). Considering all these studies, it was concluded that the Flash Technique is an effective intervention method. Despite the promising results of previous, uncontrolled studies using the Flash technique, this intervention has not been tested using a controlled design with random allocation. Therefore, the claim made by the authors that "The Flash Technique (FT) is a low intensity individual or group intervention that appears to rapidly lessen the distress of disturbing and traumatic memories" (Manfield et al., 2021, p. 1) should be interpreted with caution.

In the present study, it was assumed that statistical analysis of clinical practice results, rather than following a categorical understanding, is a more appropriate and accurate study approach. In this context, it is considered that it will make an important contribution to the literature in terms of conducting a study on university students, which is a difficult process, and also knowing how the Flash Technique gives results in the intervention of childhood traumas. For this reason, it can be argued that when childhood trauma is intervened with effective psychotherapy techniques, negative memories of childhood traumas will be symptoms accompanying this trauma may decrease. In this regard, the purpose of the study was to examine the effects of the Flash Technique on memories of childhood trauma, dissociation and Post-Traumatic Stress Symptoms.

Method

Model of the Research

A single-group pre-test post-test follow up design, which is one of the quasi-**experimental** designs, was used in the study because it aimed to examine the Flash Technique procedure in university students with childhood traumas, dissociation, and post-traumatic stress symptoms.

Participants

The participant group of the study consisted of 6 university students, who were selected by the convenient sampling method. A total of 350 students were reached through the Bingöl University Student Information System and the contact information of the researcher was shared with an e-mail for the purpose of the study. On the other hand, the participants were also reached through word-of-mouth and various flyers at the university. The inclusion criteria of the study are as: (a) volunteering to participate in the study, (b) aging between 19 and 35, (c) not having a psychiatric illness such as schizophrenia or bipolar disorder, (d) having a score of >47 on the PTSD Checklist Scale (Boysan et al., 2017). As a result, 6 participants who met the criteria were identified and the study was conducted with them.

Firstly, the participants were pretested (childhood traumas, dissociation and post-traumatic stress symptoms scale), followed by an interview and Flash Technique application. Clients filled out the scales 3 weeks before

receiving the individual sessions. At the end of the first week and at the end of the first month, the scales were repeated (Yaşar et al., 2021; Wong, 2019). The purpose of applying the post-tests two weeks after the application is to prevent the scales given regarding the research from being remembered. Remembering the scale items will reduce the reliability of the answers given. All participants who agreed to participate in the study were informed and their consent was obtained.

Therapist

The therapist who provided this intervention is the author of this article and collected all the study data. He first received the Flash Technique training at Manfield on October 24, 2021. Then, he received the advanced certificate of this training from Manfield. The therapist is both an academic and a therapist of 15 years and is also an accredited and national organization certified EMDR therapist.

Data Collection Tools

Childhood Traumas Inventory: The Turkish adaptation, validity, and reliability study of the scale, which was originally developed by Bernstein et al., was conducted by Şar et al. in 2012. The scale, which consists of 28 items, includes five sub-dimensions of childhood abuse in 5 sub-dimensions; sexual, physical, emotional abuse, and emotional and physical neglect. All items are evaluated in a 5-point Likert style. In calculating the CTQ scores, the scores obtained from the positive expressions (items 2, 5, 7, 13, 19, 26, 28) are reversed (for example 1 point is reversed to 5 points, 2 points to 4 points). High scores in each subgroup indicate the possible presence of that type of abuse in childhood or adolescence. The scale is 5-point Likert type. Responses are given on the scale ranging from 1 to 5. While 1 means “never true”, 5 means “very often true”. The total of the five sub-dimension points gives the CTQ total score. The sub scores are between 5 (no neglect and abuse history) and 25 (very serious neglect and abuse history), the total score is between 25-125. The scale has five sub-dimensions. These sub-dimensions are abuse (physical-emotional-sexual) and neglect (physical-emotional) dimensions (Bernstein et al., 2003). With this scale, a total score that consists of 5 sub-scores on childhood sexual, physical-emotional abuse, and emotional and physical neglect is obtained. The Cronbach’s Alpha Value, which shows the internal consistency of the scale, was found to be 0.93 for the group that consisted of all participants (N=123) in the Turkish adaptation and validity and reliability study, and the Guttman half-test coefficient was 0.97. The test-retest correlation coefficient ($p < 0.001$, N=48) of the total score of the scale performed on clinical and non-clinical participants at 2-week intervals was found (Şenkal and Işıklı, 2015).

Dissociation Questionnaire (DIS-Q): It was developed as the first European Dissociation Questionnaire (Şar, 1996; Vanderlinden et al., 1993). DIS-Q is a self-report scale filled in by participants, scored between 1-5, and consists of 63 questions. Compared to DES, it screens for more symptoms and includes eating disorder symptoms. The reliability and validity study was conducted by Şar et al. for Turkey (1996). The scale measures the dissociation experiences in one dimension. DIS-Q is not a diagnostic tool; it is mostly used for screening or rating dissociative experiences. The Cronbach’s Alpha of the original scale was 0.94, and the internal reliability results of the subscales were 0.92, 0.92, 0.93, and 0.75. As a result of the Cronbach Alpha reliability analyzes repeated in this study, the Dissociation Scale (DIS-Q) and its sub-dimensions met the reliability requirement (George & Mallery, 2003).

PTSD Checklist Scale-PCL-5: The latest adaptation of PCL, which was created as 17 items according to DSM-III-R and is widely used in the clinical field because it measures PTSD symptoms, according to DSM-5 was made by Weathers et al. (2013). The scale was translated into Turkish by Boysan et al. (2017) and was designed based on the PTSD diagnostic criteria in DSM-5. The self-evaluation scale measures PTSD symptoms in the last 30 days, similar to the previous scale. The 20 question items in it are compatible with the DSM-5 PTSD diagnostic criteria; (Criterion B) intrusive re-experiencing, (Criterion C) avoidance, (Criterion D) negative changes and (Criterion E) hyper arousal examined in 4 sub-dimensions for symptom clusters (APA, 2013). The answers given to the items are evaluated on a 5-point scale, and each question is expected to be answered between “Never” (0 points) and “Extremely” (4 points). This scale was used to detect post-traumatic symptoms. A four factor solution found best suited to data providing support for a wide range of PTSD research. The PCL-5 demonstrated good

reliability with composite reliability coefficients of re-experiencing (.79–.92), avoidance (.73–.91), negative alterations (.85–.90) and hyper arousal (.81–.88) and temporal reliability with two-week test retest intra-correlation coefficients of .70, .64, .78, and .76, respectively. Strong associations of the total and subscale scores of the PCL-5 with other measures of trauma-related symptoms were indicative of construct validity of the screening tool. The current investigation suggested a cut-off score ≥ 47 for PTSD diagnosis, with .76 sensitivity and .69 specificity

Procedure

Firstly, the PTSD Checklist Scale was applied to 6 university students, and the Childhood Traumas and Dissociation Questionnaire was applied to those who scored above the cut-off point. Clients with a total score of 47 and above on the scale are more likely to meet the PTSD diagnostic criteria (Boysan, et al., 2017). Then, 2 interviews were conducted with 6 participants with post-traumatic stress symptoms. The purpose of the first of these interviews was to explain the procedures of the Flash Technique to the participants and to meet them, and the second interview was conducted in the form of applying the Flash Technique to each participant for 2030 minutes.

The Flash Technique procedure was performed as described below.

1. The components for a brief introduction and teaching of the procedure
 - a. Participants are asked to blink three times when “Flash” is mentioned.
 - b. During the practice, participants are asked to think only of a positive memory (Pef), but if a negative memory comes to the mind, they are asked to know that this memory was like a butterfly and flew out the window.
2. To find the positive memory, check the selected memory and make sure it is a positive memory.
3. For the participants to find the positive memory, they are instructed as follows; *“Now imagine a place that you like and that you think is safe. This may be a loved one, a pet, a place, or a positive musical sound you enjoy. During the procedure, we will ask you to go there fully engage and stay in the positive engaging focus.”*
4. The client is then asked to choose the negative memory that they want to work with. The client is asked how much discomfort this negative memory causes and the SUD score is asked. For the SUD score, the client is instructed as follows; *“Think briefly about the moment that disturbed you and rate this negative memory on a scale of 0-10”* (0 means not discomfort at all, 10 means very discomfort).
5. Each of the 6 sets is called “flash”, and they are asked to blink three times each time. The client is asked to pause briefly and return to the traumatic memory after every six sets. Then, they are asked if there has been a change in their traumatic memory, and when they think about this memory, they are asked how much discomfort it causes on a scale of 0 to 10. This process continues until it reaches zero. The same traumatic memory process is continued until the SUD score is 0. After the SUD score becomes 0, they are asked to switch to another traumatic memory (if the client cannot process the disturbing memory to 0, it is necessary to looking into feeder memories and blocking beliefs).
6. At the end of the session, the client is asked again for SUD scores.

The Cases

Table 1. Summary of the Treatment of Six Traumatic Events

Case	Pre-FT SUD	Post-FT SUD	TSSB	Minutes of FT	Number of memories studied	Number of interviews
1	1st Memory SUD:10 2nd Memory SUD:9	1st Memory SUD: 0 2nd Memory SUD: 0	Yes	55	2	2
2	9	0	Yes	35	1	2
3	9	0	Yes	40	1	2
4	1st Memory SUD:10 2nd Memory SUD:10	1st Memory SUD: 0 2nd Memory SUD: 0	Yes	55	2	2
5	9	0	Yes	35	1	2
6	1st Memory SUD:9 2nd Memory SUD:10	1st Memory SUD: 0 2nd Memory SUD: 0	Yes	50	2	2

Note: FT= The Flash Technique; SUD= Subjective Units of Disturbance; PTSD=Posttraumatic Stress Disorder; Minutes of Ft =Time Spent Processing One Particular Memory

Case 1: Simge was a 22-year-old woman who presented with crying fits, deterioration in social relationships, forgetfulness, and sleep problems. She had lost a friend in a traffic accident a year ago and stated that she became insensitive to the environment, perceived life as a movie scene, and sometimes had difficulty in recognizing people next to her. She also stated that she always felt unhappy and depressed, that the psychiatrist she went to diagnosed her with depression and used medication. She stated that when she was 9 years old, she heard her mother screaming while her parents were arguing in the kitchen one night, she ran towards the kitchen with the sound and saw her mother lying on the floor covered in blood. He stated that as soon as he saw his mother, he fainted for a short time. Stating that her mother, who was admitted to the hospital, died a few days later, the client stated that she remembered the moments when her mother was stabbed to death after a friend died in a traffic accident a year ago (when the client went to diagnose the body of her friend who died in a traffic accident, she noticed that her clothes were bloody, just like her mother) and she was under the influence of this for days. Two interviews were conducted with the client. In the first two interviews, stabilization and safe place intervention were performed together with the short story of the client.

Then, two memories were treated with the Flash Technique, the moment when her mother was seen in blood and the screaming her mother made when she was stabbed.

Case 2: Durdane was a 21-year-old woman, who applied for psychological support with sleep disturbance, nightmares, and night terrors. She also stated that she had attempted suicide several times during a long-term (approximately 3 years) period of depression, that she was first abused at the age of 10, and then, she was exposed to the death of a friend as a result of suicide at the age of 15. The most disturbing memories of her were the moment of abuse and the death of her friend as a result of suicide.

She stated that she could not sleep especially when she was stressed, her heartbeat changed after her roommate's suicide, and she could not sleep because she was constantly feeling fear. She summed up as; *"The thought of losing my loved ones scares me so much. Death upsets my entire balance. I am very badly affected both mentally and physically. I cannot get used to the absence of people I have lost. I usually wake up with shoulder pain"*. In this case, the client's short history was taken during two interviews. Stabilization and safe ground work were performed together with the history. With the flash technique, the memory of the client about the time he was abused was treated.

Case 3: Zeynep was a 23-year-old woman, who survived with serious injuries in a terrible traffic accident five years ago, and since then, she has been constantly feeling tired, exhausted, anxious and unhappy in her life. She survived the accident with injuries, and unfortunately lost her uncle in the same accident. Although she had a very intense relationship with her uncle, she was constantly exposed to emotional violence from her uncle's wife from the age of five to ten, and sometimes even experienced physical violence. She also stated that her mother was very protective, anxious, avoiding social environments and distrusting anyone. Two interviews were made with the client, who applied to counseling due to the flashbacks he experienced regarding the traffic accident, and a

Flash Technique session was held for the memory of the traffic accident. In the session, the focus was on the client's flashbacks related to the traffic accident, and the feelings and bodily sensations he felt when these flashbacks were experienced were asked. He stated that he experienced intense fear and anxiety here, and also felt pain in his chest. Emotional and somatic bridging technique was applied to identify the source of this fear, anxiety and sensation in the body. The client was asked to close his eyes, go back to his childhood as much as possible and find the moment when he had experienced a feeling similar to the one you are experiencing now. The same was true for the somatic bridging technique. For example, he was asked to close his eyes now and go as far back as he could into his childhood so that he could find out when he had previously experienced a pain similar to a pain in his chest. In both cases, the client went back to the time when she was exposed to the violence of her uncle's husband when she was a child, and stated that she experienced these feelings and bodily sensations at that time as well.

Case 4: Yağmur was a 23-year-old woman, who stated that she was very afraid of the big earthquake that took place in Elazığ two years ago, that she still remembered that earthquake even after two years since the earthquake, and that she was worried about her health deteriorating because of this. She also stated that her father's cheating on his mother and that she was cheated on by her partner recently was the second biggest destruction for her. Two interviews were made with the client and two Flash Techniques were applied. The trauma of the earthquake and the memory of the incident she experienced in primary school were treated with the Flash Technique. She stated that the counselee experienced an earthquake year before the Elazığ earthquake, and in fact, the fear and anxiety she is experiencing now reminds him of the earthquake she experienced when she was 8 years old. She stated that he lost his mother in this earthquake and that she suffered from this separation for a long time.

Case 5: Ela was a 24-year-old woman, who had tremors that started with heart palpitations, shortness of breath, chest tightness, sweating, chills, numbness in the hands and face, and persistent thoughts of death. The client also stated that she had a panic attack in 2013 and that there were intense problems in her family at that time. On the other hand, she stated that she used drugs due to gastrointestinal problems during the period when these problems were present, but she did not get any benefit from these drugs and she stopped taking the drugs. Similarly, she was frequently warned by her parents in her childhood, so she was shy and introverted in her childhood. Two interviews were made with the client and the memory of the violence in the family in 2013 was treated with the Flash Technique.

Case 6: Berfin was a 22-year-old woman, who presented with nightmares, sleep disturbance, avoidance behaviors, low self-esteem, and anxiety that started after being separated from her mother for a certain period of time in her childhood. The client explained her situation as *"They were building a new house for my grandmother, we went to visit the family. My mother lost her balance and fell into the void, but they did not tell me this for a long time. I thought that I was abandoned by my mother and in the process I closed in on myself. When I was playing in the garden, I saw a bandaged person on a wheelchair walk in, and I was afraid of the appearance. They said that it was my mother, holding my hand and leading me to the person who had entered. I walked away crying. They convinced me and took me back and told them what had happened. After getting used to my mother, my nightmares started to increase. I did not know why I was having nightmares and what those nightmares meant. Later, my nightmares and bad dreams were related to my mother's accident, and I decided to seek psychological support because I did not accept that my mother fell, the accident and my mother's condition, thinking that it caused me sleep problems"*.

Two interviews were made with the client and then two memories were studied with the Flash Technique; the first time she met her mother, who had an accident in a single session, and the hospitalization in her childhood because of her mother's illness, and her thought that her mother had left her during this time, and the effect this had on her.

Data Analysis

In the present study, the data were obtained as a result of the Flash Technique that was applied to 6 university students. The Non-parametric Friedman Test was used for the difference between the measurements because the

study group was very small. These repeated measurements are the equivalent of the One-Way Analysis of Variance. The level of .05 was taken as the significance level and the analyses were performed with the SPSS (version 25) package program.

Results

In line with the purpose of the study, the effects of the Flash Technique on the childhood traumas, dissociation, and post-traumatic stress symptoms of university students were examined and the findings were given. Firstly, the effect of the Flash Technique on the dissociation levels of university students was examined and the findings are given in Table 2.

Table 2. Friedman Test results regarding the effect of The Flash Technique on university students' dissociation levels

Measurement tool	Measurement	N	Mean rank	$\bar{X} \pm SD$	χ^2	df	d	Difference
DİS-Q	Pretest	6	3.00	152.50±56.47	10.33*	2	0.86	1 > 2
	Post-test	6	1.83	75.50±24.97				1 > 3
	Monitoring	6	1.17	64.00±25.32				2 > 3

Note: *p < .05; 1 = Pretest, 2 = Post-test, 3 = Monitoring test.

At the end of the first week and at the end of the first month, the scales were repeated. When Table 2 is examined, it is seen that the Flash Technique was statistically effective on the dissociation levels of university students ($\chi^2(2) = 10.33$; p < .05). The Wilcoxon Signed-Rank Test, revealed that the pretest dissociation levels (M = 3.00, SD = 2.00) of university students were higher than the posttest (M = 1.83, SD = 2.00) and monitoring test. After the effects of the Flash Technique on university students' dissociation levels were examined, its effects on childhood trauma symptoms were examined and the results are given in Table 3.

Table 3. Friedman test results on the effects of the Flash Technique on childhood trauma symptoms of university students

Measurement tool	Measurement	N	Mean rank	$\bar{X} \pm SD$	χ^2	df	d	Difference
Childhood traumas inventory	Pretest	6	2.92	113.83±13.24	8.96*	2	0.75	1 > 2
	Post-test	6	1.83	85.67±19.10				1 > 3
	Monitoring	6	1.25	75.50±27.55				

Note: *p < .05; 1 = Pretest, 2 = Post-test, 3 = Monitoring test. Mean rank (2.92, 1.83 and 1.25) refers to the degree of distress taken from the scale.

At the end of the first week and at the end of the first month, the scales were repeated. When Table 3 is examined, it is seen that the Flash Technique was statistically effective on the childhood trauma symptoms of university students ($\chi^2(2) = 8.96$; p < .05). The Wilcoxon Signed-Rank Test, revealed that the pretest results of the childhood trauma symptoms of the university students were higher than the posttest and the monitoring test. After the effects of the Flash Technique on the childhood trauma symptoms of university students were examined, the effects on post-traumatic stress symptoms were examined and the results are given in Table 4.

Table 4. Friedman test results on the effects of the Flash Technique on post-traumatic stress symptoms of university students

Measurement tool	Measurement	N	Mean rank	$\bar{X} \pm SD$	χ^2	df	d	Difference
PTSD Checklist	Pretest	6	3.00	56.33±11.33	12.00*	2	1.00	1 > 2
	Post-test	6	2.00	43.33±9.69				1 > 3
	Monitoring	6	1.00	33.50±9.87				2 > 3

Note: * $p < .05$; 1 = Pretest, 2 = Post-test, 3 = Monitoring test

At the end of the first week and at the end of the first month, the scales were repeated. When Table 4 is examined, it is seen that the Flash Technique was statistically effective on post-traumatic stress symptoms of university students ($\chi^2 (2) = 12.00$; $p < .05$). The Wilcoxon Signed-Rank Test, revealed that the pretest results of post-traumatic stress symptoms of university students were higher than the posttest and the monitoring test results, and the posttest results were higher than the monitoring test. Symptom severity is a score above or below the 48 cut-off points of the scale.

Before applying the Flash technique, all participants' scores were higher than 48. After the application, the post-test score was 43.33 and this score was 33.50 in the follow-up test. At the end of the first week and the end of the first month of the intervention, the same scales were given to the university students again. Students were asked to answer the scales by thinking about their own symptoms. Kendalls uses the Cohen's interpretation guidelines of 0.1 - < 0.3 (small effect), 0.3 - < 0.5 (moderate effect) and ≥ 0.5 (large effect)

After the effects of the Flash Technique on post-traumatic stress symptoms of university students were examined, its effect on SUD levels was examined and the results are given in Table 5.

Table 5. The Wilcoxon Test results regarding the effect of the Flash Technique on the SUD levels of university students

Measurement tool	Measurement	N	Mean rank	Z
SUD	Pretest	6	3.50	-2.23*
	Post-test	6	0.00	

Note: * $p < .05$; 1 = Pretest, 2 = Post-test

At the end of the first week, the scales were repeated. When Table 5 is examined, it is seen that the Flash Technique is statistically effective on the SUD levels of university students ($Z = -2.23$; $p < .05$). When the mean rank was examined, it was found that the SUD levels of the university students were higher before the therapy (pretest) and this difference was statistically significant than the post-test.

Discussion

In the present study, the purpose was to examine the effectiveness of the Flash Technique in reducing distress related to Childhood Traumas, Dissociation, and Posttraumatic Stress Symptoms. According to the data obtained in the study, it was found that the Flash Technique, which is based on the assumption that the symptoms of a certain psychological disorder can be reduced by restructuring the traumatic stress symptoms effectively using an adaptive information processing model, is effective in alleviating the symptoms occurring after traumatic experiences. The current results indicate that the Flash Technique can be effective in alleviating symptoms such as restlessness and avoidance, overstimulation, constant alertness, alienation from oneself and the environment, separation, traumatic stress, and deterioration of mental health quality in individuals who have childhood traumas. It was reported in the literature that there is no consensus on the best practice recommended for the psychotherapy of individuals who have childhood traumas (Cloitre et al., 2011; de Jongh et al., 2016). In my opinion, most interventions developed until today for the therapy of traumas directly expose the victim to traumas, and in this case, the victims' unwillingness to confront the memory of their traumas makes it difficult to achieve psychological well-being. Previous studies suggested that some patients deny their distress and do not accept their experiences because of the fear that their present well-being will also be affected negatively (Frazier, 2000). It was also emphasized that thinking about traumas can produce feelings of shame in the individual and make it difficult to seek professional help and accept their past (Frazier, 2000; Tapia, 2014). Similarly, it was found that survivors of childhood traumas chose to create a false self-image to hide the effects of their negativities on their well-being, instead of isolating themselves from their lives (Downey & Crummy, 2022). For this reason, some treatments, such as cognitive-behavioral therapy, are based on prolonged re-experiencing of traumatic events to reduce symptoms (Foa et al., 1999). On the other hand, there is a similar exposure to Cognitive Behavioral therapies, although other trauma-focused treatments such as Eye Movement Desensitization and Reprocessing

(EMDR) partially expose the memories of traumas. In this context, it can be argued based on the data obtained in the present study that the Flash Technique is statistically effective on the childhood trauma symptoms of university students. The fact that the Flash Technique decreased depending on time between the pretest, posttest and follow-up tests of the participants was probably not both the direct exposure of the victims to the traumas experienced during the intervention process (there is a very limited exposure in this technique, usually 5 seconds on average) and the traumatic memory of the traumatic memory can be considered as a short duration of work. In this regard, it can be argued that the Flash Technique can be effective without exposing the traumatic memory for a long time. The main reason for the effectiveness of the technique is that the victims are not directly exposed to past traumas during the intervention process and the traumatic memory is short-lived. In the study, it was also found that the Flash Technique was effective without the need for prolonged exposure to traumatic memory. This is consistent with other studies suggesting that limited exposure to trauma memories is necessary to reduce symptoms (Arntz, 2012; Sloan et al., 2018).

In conclusion, it can be argued that the Flash Technique is effective in reducing and/or improving the symptoms of childhood traumas and can reduce the burden on patients and therapists because individuals do not need to re-experience their traumas in detail during the treatment process.

Another finding in the study was the effectiveness of the Flash Technique on the dissociation levels of university students. This finding is consistent with the finding that the Flash Technique is easily applicable in individuals who have dissociative symptoms and is effective in reducing dissociative symptoms (Manfield et al., 2017; Wong, 2019). Trauma-Focused Therapy is an unpleasant procedure because it involves active recalling of previously avoided fearful memories, and for this reason, it is expressed that interventions that include a less interventional and pleasant treatment form have more positive effects (Imel et al., 2013). Also, although not directly related to lowering DIS-Q scores, the Flash Technique, in the study conducted by Shebini (2019), it was stated that the Flash Technique allows the complete desensitization of trauma memories and the planned merging of fragmented parts. Manfield et al. (2017) reported that the Flash Technique is very beneficial for highly dissociative clients; however, it was found in this study that it has a potential use even for clients who are alienated from themselves and their environment and have multiple identities. By means of DIS-Q, only the general symptom levels of the participants regarding their dissociation were examined. During the Flash Technique application process, multiple identities were not detected in the participants.

Another result of the present study was the finding that the Flash Technique was effective in reducing and improving the symptoms of post-traumatic stress. In the analysis, a significant difference was determined between the pre-treatment, post-treatment, and monitoring tests (follow-up test at the end of the first month after the application) of the participants. These results confirm the results of previous studies reporting that the Flash Technique reduces the symptoms of traumatic stress and traumatic grief (Avcı & Karakış, 2022; Shebini, 2019; Yaşar et al., 2022 Yaşar et al., 2021; Wong, 2021). The fact that the technique brings a positive perspective toward traumas with well-being and emotional memory provides greater effects on traumas (Avcı & Karakış, 2022; Manfield et al., 2021).

As a result, it is possible to say that the findings of this study will contribute to the reliability of the Flash Technique. Also, the advantages of the technique are that the client comes into contact with traumatic memories several times in a short time, reduces the risk of dissociation that disrupts the integration of the client's body and mind, and has a relatively easy processing format. For this reason, the study can be a good proof of the reliability of the Flash Technique. On the other hand, it shows that the Flash Technique can be effective in relieving symptoms such as over-stimulation, alienation from oneself and the environment, and deterioration of mental health quality of individuals with childhood traumas. In this study, Flash Technique application was tried in the group with higher scores from the childhood traumas scale. This is another strength of this study. Patients with high childhood trauma scores are prone to be complex trauma patients. Therefore, they can often dissociate and have difficulties in therapy. The therapy process in these groups is difficult and takes a long time. The fact that especially those with high childhood trauma scores were included in this study is an important difference showing

that the flash technique can be applied safely even in this group. This should be mentioned more extensively in the discussion.

In conclusion, the case studies were all based on a single session, from clients with PTSD diagnoses and yet the data showed substantial reduction in dissociation symptoms, childhood trauma symptoms and PTSD symptoms after only one session. As compared to Yasar et al.'s research offering a single session of FT (Yasar et al., 2021), this research was based on clients with PTSD diagnoses while Yaşar's research was based mostly on volunteers without a PTSD diagnosis, based on their pre-treatment mean IES-R score of 24.52. As compared to Wong (2019), this research was based on a single session of FT versus 6 sessions of FT for Wong's work with substance abusers. This study has a number of limitations, notably its small sample size and lack of a control group. The study is a single-group pre-test post-test control group design, which is one of the quasi experimental designs. This type of design does not allow to find causal association between the intervention and the reducing of symptoms because of lack of control group without intervention (in order to control, a possible time effect) and overall for the lack of randomization. For this reason, "after the treatment can observe a reducing of symptoms, probably due to the treatment". It should also be noted that the reducing of symptoms could be due to a possible "placebo effect" (Yaşar, Gündoğmuş & Gündüz, 2021).

References

- American Psychiatric Association [APA]. (2013). *Diagnostic and Statistical Manual of Mental Disorders (5th ed.)*. Arlington, VA: American Psychiatric Publishing.
- Arntz, A.(2012). *Imagery rescripting as a therapeutic technique: review of clinical trials, basic studies, and research agenda*. J Exp Psychopathol, 3: 189–208.
- Avcı, M. (2023). Investigation of the Single Session Effect of Flash Technique on Adolescents with Exam Anxiety: A Group Application. *International Anatolian Journal of Social Sciences*, 7 (1), 222-231. DOI: 10.47525/ulasbid.1239585
- Avcı, M. ve Karakış, M. (2022). Psikolojik İyi Olmayı Arttırmada Flash Emdr Tekniğinin Hızlı Etkinliği: Travmatik Yas Olgusu, *Üsküdar Üniversitesi 4. Uluslararası Pozitif Psikoloji Kongresi, Bildiri*, p:97-98
- Bernstein, D. P., Ahluvalia, T., Pogge, D., & Handelsman, L. (1997). *Validity of the childhood trauma questionnaire in an adolescent psychiatric population*. Journal of the American Academy of Child & Adolescent Psychiatry, 36, 340-348.
- Borsboom, D. (2017) *A network theory of psychological disorders*. World Psychiatry 16(1):5–13.
- Boysan, M., Guzel Ozdemir, P., Ozdemir, O., Selvi, Y., Yilmaz, E., & Kaya, N. (2017). *Psychometric properties of the Turkish version of the PTSD Checklist for Diagnostic and Statistical Manual of Mental Disorders, (PCL-5)*. Psychiatry and Clinical Psychopharmacology, 27(3), 306-316.
- Cloitre, M., Stolbach, B.C., Herman, J.L., van der Kolk, B., Pynoos, R., Wang, J. & Petkova, E. (2009) *A developpsychological approach to complex PTSD. Childhood and adult cumulative trauma as predictors of symptom complexity*. J Trauma Stress 22(5):399–408
- Cloitre, M., Courtois, C.A., Charuvastra, A., Carapezza, R., Stolbach, B.C.& Green, B.L. (2011). *Treatment of complex PTSD: results of the ISTSS expert clinician survey on best practices*. J Trauma Stress. 24: 615–27.

- Croft, J., Heron, J., Teufel, C., et al. (2019). *Association of trauma type, age of exposure, and frequency in childhood and adolescence with psychotic experiences in early adulthood*. *Jama Psychiatry*. 76(1):79-86.
- de Jongh, A., Resick, P.A., Zoellner, L.A., van Minnen, A., Lee, C.W., Monson, C.M. et al. (2016). *Critical analysis of the current treatment guidelines for complex PTSD in adults*. *Depress Anxiety*. 33: 359–69
- Downey, C., & Crummy, A. (2022). The impact of childhood trauma on children's wellbeing and adult behavior. *European Journal of Trauma & Dissociation*, 6(1), 10-37.
- Ertek, İ. E., İlhan, M. N., Dikmen, A. U., & Gözükar, M. (2022). *Prevalence and Association of Childhood Traumas, Dissociative Experiences and Post Traumatic Stress Disorder*. *GMJ*, 33, 134-139.
- Foa, E.B., Davidson, J.R.T. & Frances, A. (1999). *The expert consensus guideline series: treatment of posttraumatic stress disorder*. *J Clin Psychiatry*. 60: 4–76
- Frazier, P. A. (2000). *The role of attributions and perceived control in recovery from rape*. *Journal of Personal and Interpersonal Loss*, 5(2-3), 203–225.
- Fusar-Poli P, Tantardini M, De Simone S, et al.(2017). *Deconstructing vulnerability for psychosis: Meta-analysis of environpsychological risk factors for psychosis in subjects at ultra high-risk*. *Eur Psychiat*. 40:65-75.
- Imel, Z. E., Laska, K., Jakupcak, M., and Simpson, T. L. (2013). *Meta-analysis of dropout in treatments for posttraumatic stress disorder*. *J. Consult. Clin. Psychol*. 81, 394–404.
- George, D., & Mallery, M. (2010). *Spss for windows step by step: a simple guide and reference*. Boston: Pearson.
- Gewirtz-Meydan, A., & Godbout, N. (2023). *Between pleasure, guilt, and dissociation: how trauma unfolds in the sexuality of childhood sexual abuse survivors*. *Child Abuse & Neglect*, 141, 106195.
- Global Health Estimates (2019) *Disease Burden by Cause, Age, Sex, by Country and by Region, 2000– Geneva: World Health Organization; 2020*.
- Kate, M. A., Jamieson, G., Middleton, W. (2023). *Parent-child dynamics as predictors of dissociation in adulthood*. *European Journal of Trauma & Dissociation* 7(1), 100312. <https://doi.org/10.1016/j.ejtd.2023.100312>.
- Kessler, R.C., Aguilar-Gaxiola, S., Alonso, J. et al. (2017) *Trauma and PTSD in the WHO world psychological health surveys*. *Eur J Psychotraumatol*.
- Manfield, P., Lovett, J., Engel, L. & Manfield, D. (2017). *Use of the the Flash Technique in EMDR therapy: Four case examples*. *Journal of EMDR Practice and Research*, 11(4), 195-205.
- Manfield, P., Engel, L., Greenwald, R. & Bullard, D. (2021) *The Flash Technique in a low-intensity group trauma intervention for Healthcare providers impacted by COVID-19 patients*. *Journal of EMDR Practice and Research*. 15(2).
- Marangoni, C., Hernandez, M., Faedda, G.L. (2016) *The role of environpsychological exposures as risk factors for bipolar disorder: a systematic review of longitudinal studies*. *J Affect Disord*. 193:165-174.

- Musisi, S., & Kinyanda, E. (2020). *Long-term impact of war, civil war, and persecution in civilian populations—Conflict and post-traumatic stress in African communities*. *Frontiers in psychiatry*, 11, 20
- Ródenas_Perea, G., Velasco_Barbancho, E., Perona_Garcelán, S., Rodríguez_Testal, J. F., Senín_Calderón, C., Crespo_Facorro, B., & Ruiz_Veguilla, M. (2023). *Childhood and adolescent trauma and dissociation: the mediating role of rumination, intrusive thoughts and negative affect*. *Scandinavian Journal of Psychology*, 64(2), 142149.
- Schäfer, I., & Fisher, H. L. (2022). Childhood trauma and psychosis-what is the evidence?. *Dialogues in clinical neuroscience*.
- Simeon, D. & Putnam, F. (2022). *Pathological Dissociation in The National Comorbidity Survey Replication (NCS-R): Prevalence, morbidity, comorbidity, and childhood maltreatment*. *Journal of Trauma & Dissociation*, 23(5), 490-503.
- Shebini, N. (2019). *The Flash Technique for safe desensitization of memories and fusion of parts in DID: Modifications and resourcing strategies*. *Frontiers of the Psychotherapy of Trauma and Dissociation*. 3(2):151-164.
- Sloan, D.M., Marx, B.P., Lee, D.J. & Resick, P.A. (2018). *A brief exposure-based treatment vs cognitive processing therapy for posttraumatic stress disorder: a randomized noninferiority clinical trial*. *JAMA Psychiatry* 2018; 75: 233–9.
- Şar, V., Akyu˘z, G., & Dog˘an, O. (2007). *Prevalence of dissociative disorders among women in the general population*. *Psychiatry Research*, 149, 169–176.
- Şar, V. (1996). *Dissociation Ölçeđi(DIS-Q)-Türkçe Versiyon (Uyarlama)*. İstanbul Tıp Fakóltesi Psikiyatri Anabilim Dalı Klinik Psikoterapi Birimi, İstanbul.
- Şenkal, İ. & Işıklı, S. (2015). *Childhood traumas nın ve bağlanma biçiminin depresyon belirtileri ile ilişkisi: Aleksitiminin aracı rolü*. *Türk Psikiyatri Dergisi*, 26 (4):261-67
- Tapia, N. D. (2014). *Survivors of childhood sexual abuse and predictors of adult re-victimization in the United States: A forward logistic regression analysis*. *International Journal of Criminal Justice Sciences*, 9(1), 64–73.
- Trotta, A., Murray, R.M. and Fisher, H.L. (2015). *The impact of childhood adversity on the persistence of psychotic symptoms: a systematic review and meta-analysis*. *Psychol. Med.* 45(12):2481-2498.
- Van der Hart, O., Nijenshuis, E. R. S., & Steele, K. (2011). *The haunted self. Structural dissociation and the treatment of chronic traumatization*. London: WW Norton and Company Ltd
- Vanderlinden, J., et al. (1993). *The dissociation questionnaire (DIS- Q): Development and characteristics of a new self-report questionnaire*. *Clinical Psychology & Psychotherapy*, 1(1): p. 21-27.
- Yap, M.B., Pilkington, P.D., Ryan, S.M. & Jorm, A.F. (2014). *Parental factors associated with depression and anxiety in young people: a systematic review and meta-analysis*. *J. Affect. Disord.* 2014;156:8-23.

- Yaşar, A. B., Konuk, E., Kavakçı, Ö., Uygun, E., Gündoğmuş, İ., Taygar, A. S., & Uludağ, E. (2022). *A randomizedcontrolled trial of EMDR flash technique on traumatic symptoms, depression, anxiety, stress, and life of quality with individuals who have experienced a traffic accident*. *Frontiers in psychology*, 1127.
- Yaşar, A.B, Gündoğmuş. İ. & Gündüz, A. (2021). *The effects of single session EMDR the Flash Technique group procedure on traumatic symptoms*. *J. Psychiatry*.58, 41–46
- Watters, E. R., Aloe, A. M., & Wojciak, A. S. (2023). *Examining the associations between childhood trauma, resilience, and depression: a multivariate meta-analysis*. *Trauma, Violence, & Abuse*, 24(1), 231-244.
- Wong, S.L. (2021). *A model for the the Flash Technique based on working memory and neuroscience research*. *J. EMDR Prac. Res.* 2021;15, 174–184.
- World Health Organization (2022). *World health statistics 2022: monitoring health for the SDGs, sustainable development goals*.