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ARAŞTIRMA | RESEARCH

EMDR Integrative Group Treatment for Female Adolescents Victims of Sexual Abuse with Complex Posttraumatic Stress Disorder

Cinsel İstismar Mağduru Karmaşık Travma Sonrası Stres Bozukluğu olan Kız Ergenlerde Grup EMDR Uygulaması

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Abstract

The aim of this study was to investigate the effect of the Eye Movement Desensitization and Reprocessing Integrative Group Treatment Protocol (EMDR-IGTP), which was previously used in disaster and war related traumas, on depression and trauma scores in female adolescents with Post-Traumatic Stress Disorder. This is the first study with adolescents in this field. For this purpose, 13 female adolescents underwent 3 sessions of Group EMDR protocol. The cases had history of sexual abuse and had been given standard medical treatment for at least 6 months. The Posttraumatic Stress Index and the Children Depression Inventory were administered to the patients before therapy sessions and then 1 month after the sessions were completed. The mean age of the patients was 16 (min: 14 max: 17). 84.6% (n: 11) of the cases had experienced more than one traumatic event before. The mean Child Depression Inventory scores were 19 (± 6.4) before therapy and 11.4 (± 5.5) at 1-month follow-up, Post-Traumatic Stress Index scores were 53.5 (± 7.5) before therapy, and 39.4 (± 8.6) at 1-month follow-up. There was a statistically significant difference in both depression and trauma scores before and after follow-up. Complicated PTSD is a psychiatric disorder that affects lives of individuals in many ways. Although standard psychotropic medication has a partial effect in reducing post-traumatic stress symptoms, this is insufficient. Group therapy has been used mostly in collective traumatic events; it has been shown that can use effective in complex PTSD as well with this study.

Keywords: EMDR, sexual trauma, adolescent, group therapy, depression

Öz

Bu çalışmanın amacı daha önce afet ve savaş ilişkili travmalarda kullanılmış olan Grup EMDR Protokolünün, Karmaşık Travma Sonrası Stres Bozukluğu (TSSB) olan kız ergenlerde depresyon ve travma skorlarına etkisinin olup olmadığını araştırmaktır. Araştırma bu alanda ergenlerde yapılmış ilk çalışmadır. Bu amaçla 13 kız ergene iki grup halinde 3 seans Grup EMDR protokolü uygulanmıştır. Olgular daha önce cinsel istismara uğrayan ve en az 6 aydır standart medikal tedaviler uygulanan vakalardır. Olgulara çalışma öncesinde ve seanslar tamamlandıktan 1 ay sonra Çocuklar için Travma Sonrası Stres İndexi ve Çocuklar için Depresyon Ölçeği uygulanmıştır. Olguların yaş ortalaması 16 (min:14 max: 17) idi. Olgulardan %84,6'si (n:11)' ü daha önce birden fazla travmatik olay yaşamıştı. Depresyon skorları ortalaması terapi öncesinde 19 (±6,4) terapi sonrası 1. ay takibinde 11,4 (±5,5), Travma sonrası stres indexi skorları terapi öncesinde 53,5 (±7,5), terapi sonrası 1. ay takipte 39,34 (±8,6) olarak bulunmuştur. Hem depresyon hem de travma skorlarında terapi öncesi ile sonrası arasında istatistiksel olarak anlamlı fark saptanmıştır. Karmaşık TSSB bireyin hayatını birçok yönden etkileyen bir psikiyatrik bozukluktur. Standart psikotrop medikasyon travma sonrası stres belirtilerini azaltmada kısmi etkiye sahip olmakla birlikte yeterli etkiye sahip değildir. Grup terapisi daha çok toplu travmatik olaylarda kullanılmış olmakla birlikte bu çalışma ile birlikte Karmaşık TSSB' lerde de kullanılabileceği gösterilmiştir..

Anahtar sözcükler: EMDR, cinsel travma, ergen,grup terapi, depresyon

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POST-TRAUMATIC STRESS DISORDER (PTSD) is a psychiatric disorder that can develop after exposure to a traumatic event. People who have PTSD may suffer from intrusive memories of the trauma, sleep difficulties, attention problems, emotional dysregulation, hyperarousal and avoidance of traumatic memories (APA, 2013). PTSD often occurs after a single trauma. However, complex PTSD is a condition that can be seen in children and adults who experience trauma such as violence, neglect, and abuse in early childhood and for a prolonged time (Brewin et al. 2017). Complex PTSD is a common condition accompanied by comorbid psychiatric diagnoses such as depressive disorders, anxiety disorders, substance use disorders and even metabolic disorders. In addition, the presence of these comorbid diagnoses may worsen patients symptomatology (Spinhoven et al. 2014, Rosenbaum et al. 2015, Gekker et al. 2018). Studies have shown that the frequency of PTSD is higher in women (Kessler et al. 1995). In addition to gender-related factors, a higher exposure rate to trauma is also effective in the higher prevalence of PTSD in women (Kessler et al. 1995, Ressler et al. 2011).

EMDR is a therapy method that has been used for more than 30 years in people with traumatic experiences. This method, developed by Shapiro, is based on the principle of desensitizing traumatic events with eye movements and developing adaptive beliefs (Shapiro 1996). Although the publications related to EMDR have been limited until the last 10 years, the interest in this issue has increased recently. However, there are still not enough studies in the literature on the child and adolescent age group (Moreno-Alcázar et al. 2017, Valiente-Gómez et al. 2017). Studies have shown that EMDR is effective in improving PTSD symptoms in children and adolescents as well as adults (Mevissen et al. 2017, Karadag et al. 2020, Meentken et al. 2020). In recent years, controlled studies have been shown that EMDR can also improve other psychiatric disorders such as depressive disorders and anxiety disorders (Jahanfar et al. 2020, Yunitri et al. 2020).

EMDR can be applied both individual and group therapy. EMDR Integrative Group Treatment Protocol (EMDR-IGTP) is a relatively new treatment model compared to individual EMDR. With this method bilateral stimulation is added to standard group therapy methods. Previously used only in the early stages of social traumas such as natural disasters, and war, EMDR-IGTP has been revised over time and has been brought into the literature by Artigas et al. (Artigas et al. 2000, Artigas et al. 2014). There are findings that EMDR-IGTP can reduce post-traumatic stress symptoms. (Jarero 2010, Jarero 2012, Jarero et al. 2016, Yurtsever et al. 2018). In a study conducted by Gonzalez-Vazquez et al. adults with Complex PTSD were compared; TAU (treatment as usual: psycho educational intervention only) vs. TAU+EMDR. When they done pre-post comparison, more variables presented positive changes in the group including EMDR procedures(Gonzalez-Vazquez et al. 2018). It is also suggested that this method can be used for early intervention of natural disasters such as earthquakes(Maslovaric et al. 2017).

To our knowledge, there have not been any studies on EMDR-IGTP for adolescents with Complex PTSD. Therefore, in this study, the author aimed to evaluate whether adolescent girls diagnosed with Complex PTSD who had been sexually abused would benefit from the EMDR-IGTP and whether their depressive symptoms would decrease.

Method

Participants

The study was conducted in Mardin, a city in southeastern in Turkey, at a Child Support Center, in May-June 2019. The initial sample included 17 girls from the institution who were victims of sexual abuse, and 13 of them completed all treatment steps and were included in the analysis. Out of 4 girls who were excluded from the study one had need psychiatric inpatient treatment, and one did not volunteer to attend further sessions and the others left from center to go to their family. Approval for the study was obtained from the institution authorities and Gazi Yasargil Education and Research Hospital ethics committee (March 29,2019/253). Consent was obtained from all adolescents and legal guardians who participated in the study. All the participants had been followed by a child and adolescent psychiatrist for at least 6 months, had received appropriate doses of medical treatment, and had regularly attended supportive interviews with institutional psychologists. PTSD diagnoses were determined according to DSM-V diagnostic criteria by a child and adolescent psychiatrist. Socio-demographic information was obtained before the study and adolescents were asked to fill the Child Post-Traumatic Stress Reaction Index (CPTS-RI) and Children's Depression Inventory (CDI). Then, the clients were divided into two groups of 9 and 8, and then received 3 sessions of EMDR-IGTP. Therapy steps were applied in exactly the same way to both groups. Each session lasted an average of one hour. Session intervals were determined weekly. At the end of the study, 1 month after the last therapy session, the 13 participants were asked to fill the CPTS-RI and CDI again. All applications have been done by the child and adolescent psychiatrist who approved by EMDRIA and has been working with children and adolescents for at least 6 years.

Measures

Child Post-Traumatic Stress Reaction Index (CPTS-RI)

CPTS-RI is a frequently used scale in determining PTSD symptom severity in childhood. The scale was developed in 1987 by Pynoos. (Pynoos et al. 1987) It is a 20-question Likert type scale. The score obtained from the scale varies between 0-80. As the score increases PTSD symptom severity quantified by the scale increases. Based on previous studies, we used a cutoff score of >40 to indicate the presence of PTSD.

Children's Depression Inventory (CDI)

Children's Depression Inventory is one of the most frequently used scales for the presence and severity of depression, for ages of 7-17. The scale, which consists of 27 items, contains items that measure depressive mood, anhedonia, vegetative functions, self-evaluation and interpersonal behavior (Kovacs 1985). In most of the studies, the cut off value was determined as above 20 (Bang et al. 2015).

EMDR Integrative Group Treatment Protocol (EMDR-IGTP) for Children

EMDR-IGTP was developed by the Mexican Association for Mental Health Support in Crisis in 1997 after Hurricane Pauline. This model was created by combining the standard EMDR protocol developed by Francine Shapiro (Shapiro 2017) and group therapy

protocols (Artigas et al. 2000). It was shown in a study by Jajero et al. that group EMDR sessions could benefit clients when the time and cost of individual EMDR sessions could not be met (Jarero et al. 2008). In the same study, it was also stated that group therapy combined with EMDR may be more effective than standard group therapies. As a result, EMDR-IGTP has been used and found effective for thousands of trauma survivors in many field studies (Maxfield 2008). In this study, EMDR-IGTP was applied in 8 steps for children, as in the original protocol..

Figure 1. Safe/calm place

Stage 1, Client history and Treatment Plan: At this stage, the therapist took the detailed medical and psychiatric history and planned treatment for adolescents staying at the center.

Stage 2, Preparatory Stage: At this stage, the therapist educated the clients and center workers on trauma, posttraumatic stress disorder and their effects on adolescents. Because adolescents were constantly staying at the center, the center employees were their main caregivers and were concerned with all their emotional/ physical needs. Then, a warm-up technique was used to attract the attention of the group members and increase within-group harmony. They were then asked to imitate "happy / sad / scary / surprised / angry" expressions, and to think about some of the events they had experienced in the past, in order to make it easier for them to recognize their own feelings. Then abdominal breathing technique was taught. The therapist then taught the clients the Butterfly Hug technique (Artigas et al, 2000). Through this technique the clients gained the skills to perform Bilateral Stimulation on their own. Then the therapist said, “Close your eyes. Then move your hands diagonally to your shoulders and tap your shoulders like a butterfly flapping wings. Breathe deeply and slowly (abdominal breathing) while trying to recognize all the changes in your mind and body, such as thoughts, images, sounds,

smells, emotions, and sensations. You can be comfortable as if you are moving above the clouds" and they were encouraged to combine Butterfly Hug with abdominal breathing. After these steps, the team leader said, "Now, please close your eyes and imagine you are in a safe or calm place, then draw the Safe/Calm Place on the paper in front of you (Figure 1). Now focus on what you see smell and hear in your Safe/Calm Place and slowly do the Butterfly Hug 6-8 times." to complete Safe/Calm Place installation. The clients who had better feelings after the session were told to take the Safe/Calm Place study home and use it whenever they wanted.

Figure 2. Subjective discomfort level

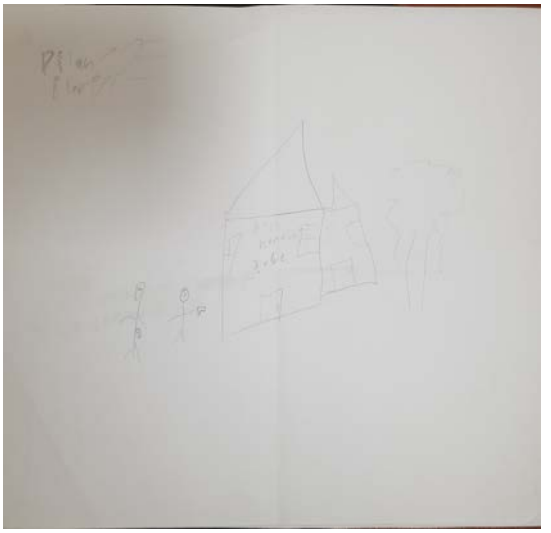

Figure 3. Future vision

Stage 3, Evaluation: The clients were asked to divide a sheet of paper by four. Each compartment was named with the letters A, B, C, D. They were asked to think about the worst part of the event they experienced in a similar way to the standard EMDR protocol. Then they were asked to draw the worst part of the incident on section A (square A) on the paper. They were asked to look at the paper and score their discomfort between 0 to 10 (SUDs).

Stage 4, Desensitization: At this stage, the clients were asked to do Butterfly Hug for about 60 seconds, while looking at what they drew. After the Butterfly Hug, they were told to "Try to notice how you feel and draw what you want to draw on section B." Then, they were asked to re-score their discomfort when looking their drawings (SUDs). Then they were asked to drop their pens and do Butterfly Hugs for about 60 seconds. The same process was repeated for sections C and D. This stage was completed after the last time SUDs were taken (Figure 2).

Stage 5, Future Vision: At this stage, the clients were told to draw or write whatever they wanted about how they wanted to see themselves in the future. After the drawing was completed it was consolidated via the Butterfly Hug (Figure 3).

Stage 6 Body scan: The clients were told to "Think about the incident and scan your body thoroughly. If you have any discomfort, do the Butterfly Hug."

Stage 7, Closing: Close your eyes, remember your safe location and do Butterfly Hugs for about 60 seconds. Then take three deep breaths and open your eyes.

Stage 8, Reevaluation and Follow-Up: At the end of the group intervention, the therapist identifies children needing further assistance. Then the therapist directs the client for individual interventions.

Statistical analysis

Statistical analyses were performed using the SPSS software version 22. The variables were investigated using histograms, probability plots and analytical methods (Kolmogorov-Smirnov/ Shapiro-Wilk's test) to determine whether they are normally distributed. Descriptive analyses were presented using medians and standard deviations for parametric parameters. Since Child Post-Traumatic Stress Reaction Index Scores and Children's Depression Inventory Scores were not normally distributed; non-parametric tests were conducted to compare these parameters, as well as to compare the ordinal variables. The Wilcoxon test was used to compare the change in these parameters between pre-treatment and 1-month follow-up. A p-value of less than 0.05 was considered to show a statistically significant result.

Table 1: Group EMDR intervention results according to CPTS-RI and CDI scales

	Before treatment	After follow-up	p value
Child Post-Traumatic Stress Reaction Index	53.5 (SD 7.5)	39.4 (SD 8.6)	P=0.002
Presence of PTSD (cut-off score :40)	13 (100%)	7 (53.8%)	P=0.014
Children's Depression Inventory	19 (SD 6.9)	11.4 (SD 5.5)	P=0.007
Presence of Depression (cut-off score :20)	6 (46.2%)	0 (0%)	P=0.014

CPTS-RI: Child Post-Traumatic Stress Reaction Index; CDI: Children's Depression Inventory; PTSD: Post-traumatic Stress Disorder

Results

In total, 13 female adolescents with Complex PTSD completed the study. The patients had a mean age of 16 (SD= 1.08). The mean age of first sexual trauma experience of the patients was 12.2. Most of them had more than one traumatic experience according to the List of Traumatic Events (n:11, 84.6%).

The pre-treatment CPTS-RI scores of all the adolescents ranged from 42 to 68 with the average CPTS-RI score being 53.5 (SD= 7.5). All girls were above the threshold before treatment according to this cutoff value. Pretreatment mean CDI was 19 (SD= 6.9) and ranged from 11 to 36. 6 out of 13 patients had depressive disorder according to cutoff value of the questionnaire. After 3 session of EMDR-IGTP, patients were re-evaluated at the end of first month. CPTS-RI and CDI Scales were reapplied. Mean CPTS-RI and CDI scores were 39.4 and 11.4 respectively. On the other hand, there were significant differences between the mean pre-test scores and follow-up scores for both questionnaires ($p<0.05$). The number of patients with over-threshold PTSD decreased to 7 in 13. In addition, CDI scores of all patients decreased to sub-threshold values (Table 1).

Discussion

This study at a Children Support Center in Turkey investigated whether EMDR-IGTP might be an efficient instrument in alleviating symptoms of adolescent females who had been exposed to sexual abuse. Studies have reported individual EMDR sessions to be more effective than group EMDR sessions, however group EMDR has been shown is a strong option in cases of limited time and opportunity (Allon 2015). In a

study by Allon, individual EMDR sessions were compared to EMDR-IGTP in victims of sexual assault and other trauma. At the end of the study, Impact of Event Scale Scores decreased from 52 to 33. While the mean pre-treatment SUD value was 9, post-treatment mean SUD values decreased to 4.8 in group therapy and to 2.8 in individual therapy. The author was only able to evaluate the post-treatment scores, due to time constraints. One of the reasons why group therapy less effective was discussed to be that the processing has not been completed due to lack of follow-up evaluations (Jarero et al. 2016). A stronger therapeutic relationship and the chance of cognitive interventions may have played a role in the rapidity and effectiveness of individual therapy (Dworkin 2003).

In our study, statistically significant improvement has occurred between pre-treatment and 1-month follow-up in complex PTSD patients who have been treated with standard treatment models for at least 6 months. However, the presence of 7 patients who still had over-threshold scores may be an indication that some patients require additional individual interventions. In a study conducted by Jajero et al. in 2014, Group EMDR was shown to be effective in children and adolescents with interpersonal trauma in line with our research (Jarero et al. 2014). Group EMDR frequently focused on PTSD symptoms, and there is a lack of studies evaluating depressive symptoms in the literature. However, recent publications report that EMDR can reduce depressive symptoms in addition to PTSD symptoms (Capezzani et al. 2013; Jahanfar et al. 2020). In our study, a significant improvement in depressive symptoms was observed, and all patients received sub-threshold scores after follow-up.

As a result, EMDR-IGTP can be considered as a method for the therapy of girls who are sexually abused, especially in cases of time and specialist limitations. Although the effects are moderated, EMDR-IGTP may be a promising tool due to its novel approach to trauma in Complex PTSD. However, long-term follow-up, randomized controlled and large-sample studies are needed to determine the strength and continuity of the treatment effect. Due to time and staff limitations the study was conducted with a small number of clients and without a control group. Also, using only self-reporting technique can be considered as a limitation. Finally, the absence of a long-time follow-up was another limitation of the study. However, the participants were treated as usual for at least six months before therapy, so it can be assumed that their symptom severity was mostly stable for a long period. Thus, long-term follow-up of patients can be considered as the strength of the study. In addition, evaluating the change of depressive symptoms in addition to PTSD symptoms with therapy can be considered among the strengths of the study.

Conclusion

Group EMDR might be a promising treatment in adolescent with Complex PTSD. But these findings should be tested with longer follow-up periods and control groups. In addition, better evaluation of individuals for treatment adherence who will be included group therapy can reduce drop-out rates.

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