

## THE APPLICATION OF EMDR THERAPY IN TREATING ADOLESCENTS WITH THE ADJUSTMENT DISORDER: A CASE REPORT

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### INTRODUCTION

According to DSM-V, the adjustment disorder is placed in the category of disorders related to trauma and stressors and it is mainly characterized by the presence of emotional and/or behavioral symptoms that occur as reactions to stressors. Stressors can be multiple or individual, as well as repetitive or continuous.

Diagnosing chronic illnesses during early or late adolescence, a period already stressful enough for adolescents because of a series of developmental tasks and challenges, brings additional stressors: the illness itself, various medical procedures and treatments, repeated cases of hospitalization with different duration periods, changes within family relationships, disrupting school and other daily activities, etc.

Diabetes mellitus type 1 is one of the most widespread metabolic disorders and the most widespread endocrine disorder in the periods of childhood and adolescence that is characterized by a sudden beginning and it includes a lifelong treatment through daily implementation of different types of treatments: insulin, measuring blood/urine glucose levels, adequate diet, physical activity, and education.

This chronic physical illness can have destructive effects in terms of chronic and acute complications.

Metabolic control of diabetes refers to the regulation of blood glucose levels and it is defined by glycated hemoglobin levels (HbA1c). According to the major studies on type 1 diabetes (DCCT Research Group 1993, 1994), an adequate metabolic control decreases the risk of complications related to type 1 diabetes. The results of research studies demonstrate that children and adolescents must maintain the level of HbA1c within the normal range: HbA1c < 7.6% (Tamborlane et al. 1994 according Wysocki et al. 2003) with the goal of decreasing the risk of complications.

Considering the aforementioned and other data from the relevant literature, type 1 diabetes is a very demanding and complex chronic physical illness and it includes numerous stressors that can cause serious psychological stress. Therefore, the adjustment is an extremely demanding process that takes months (sometimes even years) and entails certain emotional reactions that

mostly help the patient with the process of adjustment. However, if the emotional reactions are too intensive, they can also have negative effects on the adjustment and cause serious changes in the mental health of the patient.

The results of various research studies identified factors crucial for understanding the relationship between stress and chronic illnesses. Such factors chiefly refer to cognitive assessments and strategies for coping with stress, as well as to the relationships with peers, family structure, social support etc.

According to the results of several studies, as Grujić (2003) reports, it is important to take into consideration individual differences in assessment and coping with stress in order to understand the relationship between stress and metabolic control. Patients with type 1 diabetes who have poor metabolic control also have ineffective strategies of coping with stress when compared to young patients with good metabolic control. Since coping strategies in children and adolescents have a significant mediational role in the psychological adjustment to the illness, the results of studies demonstrate that the more expressed the orientation towards the resolution of everyday problems related to the illness is, the better the psychological adjustment will be.

Reid et al. (1995) according Lacković-Grgin (2000) found that coping strategies both in children and adolescents have a significant mediational role in the adjustment to the illness. They report that the more expressed the orientation towards the resolution of everyday problems related to the illness is, the better the psychological adjustment will be.

Children and adolescents with diabetes are under a greater risk of psychiatric problems such as depression, anxiety, and eating disorders. Numerous studies (e.g. Loyd & Brown 2002) report that type 1 diabetes represents a risk factor for the development of psychiatric disorders, especially of depression and anxiety, as well as that patients with chronic illnesses tend to suffer from mental disorders twice as often as their healthy peers. According to Lustman et al. (1996), in Wysocki et al. (2003), depression and anxiety can have a negative impact on the adherence to the treatment, while their treatment can decrease the levels of HbA1c.

There are numerous psychological treatments for children and adolescents with the adjustment disorder, one of them being EMDR (Eye Movement Desensitization Reprocessing). EMDR is an integrative psychotherapy method based on the reprocessing of information and desensitization of anxieties related to stressogenic experiences through visual, tactile, or auditive bilateral stimulation. It consists of eight phases, it takes into consideration all aspects (cognitive, emotional, neurophysiologic, and behavioral aspects) of a stressful or traumatic experience, and it allows for a fast desensitization of traumatic memories as well as cognitive restructuring that leads to a significant decrease in symptoms (Shapiro & Forrest 2004).

Studies show that EMDR therapy is very efficient in treating individuals diagnosed with some of the disorders related to trauma and stressors.

After the war in Bosnia and Herzegovina (BH) (1992-1995), a lot of children and adolescents showed sufferings due to developed different mental health problems after numerous severe trauma experiences, and mental health workers were in need to increase their professional skills, to help their patients as better as possible. EMDR was introduced in 1998 in Bosnia and Herzegovina during cooperation with Professor Syed Arshad Husain, a famous child and adolescent's psychiatrist, and his team in Missouri University (Sinanović 2020) just three years after the war finished. With the help of the Humanitarian Assistance Project (HAP) of UK & Ireland, Trauma Aid UK led with Sian Morgan helped with their enthusiasts to train BH mental health professionals in EMDR, so the first training was organized in 2009, and in 2014 Association of EMDR Therapists in Bosnia and Herzegovina was established (Hasanović et al. 2018, 2021).

Accordingly we nowadays may help to children and adolescents in need by using EMDR treatments (Bučan-Varatanović & Šabanović 2018, Šabanović & Draganović 2018).

The aim of the study is to demonstrate the effects of EMDR therapy in treating adolescents through a case study of a 15-year-old female adolescent with adjustment disorder.

## CASE REPORT

15.4-year-old female adolescent N.N. is a student in the first grade of secondary school. She lives in a complete family, with the parents and a younger brother. She visits the psychologist during a hospitalization on the Pediatric Clinic – Endocrinology for poorly regulated diabetes. Although there were more than 4 years since she had been diagnosed with diabetes, the adolescent still did not regulate the illness. A continually heightened level of glycated hemoglobin (HbA1c > 9%; at the time HbA1c amounts to 12.7%) demonstrated poorly regulated blood glucose.

During the first visit, the adolescent reported the following: "Whatever I do, my blood sugar is bad..." She also reports a series of anxiety and depression symptoms that have a negative impact on the state of her organism. She says that she often experiences panic attacks whenever she has to be alone, even for a short time ("I am afraid that my blood sugar will drop, I will not be able to help myself and I will fall into a coma...") or before going to bed ("The blood sugar will drop in my sleep and I will fall into coma..."). For that reason, she avoids being alone at home, going out alone, and taking the prescribed dosage of insulin before going to bed (she takes a lower dosage to prevent the drop of blood sugar during the night...). She always relies on her mother regarding the control of blood sugar and she interprets the symptoms of panic as consequences of the drop of blood sugar. Apart from the usual measuring of the blood sugar level, she often measures it during the day and night (the mother usually does this).

She says that she has been fearful since childhood when she used to stay at her grandmother's. The grandmother would always frighten me, she would never let me do anything, everything would be dangerous for her, she would always tell me that mom didn't love me and that is why she would leave me with her etc.

Her anxiety (especially separation anxiety) intensified with the onset of the illness. The panic attacks have been occurring during the last two years. More precisely, they started occurring after a follow-up examination when she expected her blood sugar to finally be on a good level, but glycated hemoglobin was higher than on the previous follow-up appointment and the doctor harshly criticized her for that. She was saying that I was completely ignorant, she yelled and, if I answered her questions, she did not even listen to me but she was just attacking me and yelling at me... My mom was quiet and she was just nodding as a sign of approval... When she said that I had to stay in the hospital on my own, I started crying. She yelled at me again and sent me to a psychologist. The psychologist yelled at me as well and he threatened that I would be sent to the Psychiatry if I did not stay in that department... I had the first panic attack before going to bed that night (I knew that blood sugar was not measured at hospitals during the night and that I would fall into a coma if it dropped and then nobody would know that...).

As she started secondary school, all her fears related to diabetes significantly intensified, so she started avoiding socializing with her peers and began underperforming at school (she mostly had As and Bs at primary school, and now she failed two subjects in the first semester and her other grades were low, too...). The patient reports that "everything worsened" with the start of secondary school ("When my blood sugar drops and when I have to eat something, teachers do not trust me, they attack me"; "I am satisfied neither with school, nor my peers, nor the teachers...", "Sometimes I think it would be best if I were dead"...).

In the conversation with the mother, we learned that the adolescent's early development had been regular. The grandmother was taking care of her in the preschool period. That is when psychopathological phenomena first appear – she expressed fears and became weepy and restless. Since the mother gave birth in that period, she explained the girl's regressive behavior and psychopathological symptoms as consequential to the brother's birth...

From the conversation about family and relationships within the family, we learned that their relationships were disrupted. The mother is anxious and she has panic attacks. The father has poorly regulated type 2 diabetes and he is prone to alcohol consumption and experiencing mood swings. The younger son is obese and he has behavioral problems. The mother completely took over the care of the patient's illness from the very onset, as well as of her husband's illness. The parents' methods regarding children's upbringing are not aligned and they are inconsistent in the use of certain methods...

The acquired information showed that the maintenance of fear and the general maintenance of symptoms related to anxiety is reinforced both by the adolescent and her environment (mostly the mother) through an overly protective relationship and acquiescence.

Apart from a clinical interview with the adolescent and an interview with her mother, a diagnostic evaluation including the use of tests was completed during the following visit. N.N. responded to all the five inventories of the Beck Youth Inventory (BYI). The results demonstrated an extremely increased anxiety, depression, and anger, as well as low self-esteem. The level of distracting behavior was within the normal range. The result profile on The Stress Coping Scale for Children and Adolescents (SUO) related to the illness showed that N.N. chiefly used Avoidance and Distraction, as well as Seeking social support from family. Cognitive-behavioral strategies directed to problem-solving were rarely used.

Having gathered information on all the variables relevant for a good adjustment and academic success, the conclusion of the psychological evaluation demonstrated that the adolescent had certain emotional and behavioral symptoms that significantly complicated the process of adjusting to the illness and the current consequences include a poor control of the illness and academic success.

The fears occurred during the development as reactions to psychological traumatic experiences in the preschool period. The beginning of the illness represented another psychological trauma for the child - it intensified all the previous fears and it brought numerous new stressors (the illness itself, repeated cases of hospitalization of different duration periods, changes within family relationships, the disruption of school, and other daily activities, etc.) that further intensified emotional and behavioral symptoms and resulted in the adoles-

cent's inability to meet the requirements of the illness and to achieve a good metabolic control of diabetes.

The start of secondary school represented yet another psychological trauma for the child - the inability to meet the requirements of the school both cognitively and behaviorally and it all resulted in the development of new psychopathological symptoms and it led to the aggravation of the already present adjustment disorder.

Having undergone the adequate diagnostic procedures, the adolescent was diagnosed with the adjustment disorder with anxiety and depressive behavior and she was recommended for psychotherapy treatment.

The parents agreed to N.N.'s psychotherapy treatment.

In the preparatory stage, good patient-therapist cooperation was established. Since several behavioral, psychological, and medical variables can influence the metabolic status of the young with type 1 diabetes, the focus of the initial stage of the treatment was on the identification of factors that make it harder for the adolescent to adhere to the treatment of diabetes, as well as on their correction through the use of behavioral and cognitive techniques. The interventions included psycho-education, keeping a self-control diary, a diary of diet and physical activity, the identification of cognition that intensify anxiety and disrupt the adolescent's treatment, cognitive restructuring, and practicing cognitive-behavioral strategies aimed at problem-solving.

In the following stage of the treatment, the adolescent was introduced to the possibilities of EMDR treatment through psycho-education. The focus was also on resource-building and relaxation techniques ("abdominal breathing" and "calm place"). A list of traumatic life experiences was made with the adolescent and the first-choice event that was desensitized through EMDR treatment referred to the traumatic memory related to the illness and that is what most disturbed her at the time. The initial target was the moment when her blood sugar level dropped to 3 when she was home alone. The negative cognition was: "I am in danger, I cannot help myself and I will fall into coma" and the positive cognition was: "I am not in danger and I can help myself". The positive cognition equaled 2 on the 1-7 Validity of Cognition (VoC) Scale (where "1" equals "completely false" and "7" equals "completely true"). The accompanying emotions were fear and concern, while the level of distress on the 0-10 Subjective Units of Distress (SUD) Scale equaled 9 (where "0" equals "no distress" and 10 marks the highest level of distress). She placed the mentioned feeling in the area of the heart. The bilateral stimulation (BLS) through eye movement was initiated and it resulted in the increase of distress with strong emotional reactions and physical sensations, and the distress was eventually significantly reduced. During the desensitization of the feelings of sadness and anger, they transformed into feelings of concern and fear and then trans-

formed back into the feeling of anger (with herself, the parents, medical staff). After 3 sessions, the distress reached the level of 0, the positive cognition was successfully installed, and the level of the VoC equaled 7.

During the following session, she opted for a traumatic memory related to school – a low grade in anatomy. The target was the moment when her mom questioned her in Anatomy and she could not remember anything although previously she had invested a lot of effort and time into studying and she was sure she had learned everything. The negative cognition was: “I am not capable of learning this” and the positive cognition was: “I am capable and I can learn to demonstrate what I know”. The level of positive cognition on the VoC equaled 2. The accompanying emotions were concern and anger, while the level of distress on the 0-10 Subjective Units of Distress (SUD) Scale equaled 7. She placed the physical sensation in her chest and legs. Bilateral stimulation (BLS) through eye movement first resulted in the increase of distress with emotional reactions and physical sensations that changed places and finally in the reduced level of distress.

Having successfully reprocessed traumatic memories related to the illness and school, during the following two sessions two additional traumatic memories from the early childhood were also reprocessed (in the 7<sup>th</sup> grade of elementary school, she was physically attacked by a friend and her mother, and they continued threatening her for a longer time whenever she was alone; the stay at her grandmother’s).

There were 16 90-120-minute-long sessions in total. The first two sessions were focused on the diagnostics. The following 6 sessions were focused on the preparations. The traumatic experience preceding the occurrence of symptoms was processed during 6 sessions of reprocessing. Apart from the aforementioned targets, other traumatic memories from childhood when she first recognized similar emotions were also reprocessed. Besides the EMDR therapy, cognitive and behavioral techniques were also used in the initial and final stages of the treatment with the goal of identifying and correcting of factors that made it difficult for the adolescent to implement the treatment of the illness and that led to the poor control of the illness and contributed to poor academic performance.

## DISCUSSION

Having undergone 6 EMDR sessions, the patient did not fulfill the diagnostic criteria for the adjustment disorder with anxiety and depressive behavior. The results support Shapiro’s (2002) reports on the results of studies that researched the efficiency of EMDR, as well as other studies that demonstrated that EMDR was successful in treating anxiety and other disorders, as well as that several sessions of active treatment result in reduction or complete disappearance of symptoms.

At the end of EMDR treatment, the adolescent’s memories of traumatic events related to the illness and school did not cause physical sensations and other subjective problems anymore. The client associated positive cognitions with these memories: “I am not in danger and I can help myself”, “I am capable and I can adequately take care of my health”, “I am capable and I can learn to demonstrate what I learn”. Her self-image improved significantly, the emotional and behavioral symptoms that were reactions to the stressors related to the illness and school were reduced, she independently takes care of her health daily through several necessary types of treatments (measuring blood sugar before taking insulin, she rarely measures blood sugar additionally, she regulated her diet and increased her physical activity), she spends the free time with her peers, her academic performance improved, and the quality of her and her family’s lives also enhanced significantly.

Upon the completion of the treatment, the adolescent reported on a subjective improvement that was also confirmed by other people (the parents, pediatrician-endocrinologist), by the academic performance at the end of the school year, as well as the medical reports.

The retesting through Beck Youth Inventory (BYI) showed that the symptoms of anxiety, depression, and anger were within the normal range. The profile of the results on The Stress Coping Scale for Children and Adolescents (SUO) showed that, after the treatment, the adolescent used a wider range of strategies for coping with the illness-related stress. The dominant strategies she uses are Problem-solving and Cognitive restructuring, while the use of Avoidance and Distraction is significantly reduced.

Metabolic control of diabetes defined by the glycosylated level of hemoglobin HbA1c was also significantly reduced in comparison to the previous values (HbA1c on 8.9%).

The integration of EMDR therapy and cognitive-behavioral therapy in treating the adolescent with psychopathological symptoms caused by stressors related to the chronic illness – type 1 diabetes, and the transfer from primary to secondary school, resulted in positive and long-term effects. Therefore, it is further recommended for treating children and adolescents with adjustment disorder.

## CONCLUSION

The integration of EMDR therapy and cognitive-behavioral therapy in treating the adolescent with psychopathological symptoms caused by stressors related to the chronic illness – type 1 diabetes, and the transfer from primary to secondary school, resulted in positive and long-term effects. Therefore, it is further recommended for treating children and adolescents with the adjustment disorder.

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Šemsa Šabanović: made substantial contributions to conception and design, participated in revising the article and gave final approval of the version to be submitted.

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