
RESEARCH ARTICLE

Effectiveness of the Rapid Eye Movement Sequential Therapy Program in Reducing Post-Traumatic Stress Disorders in Individuals with Obsessive-Compulsive Disorder: A Sample of Mothers of Children with Special Needs Referred from Psychological Clinics in Khartoum

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ABSTRACT

The study aimed to reveal the effectiveness of the Rapid Eye Movement Desensitization and Reprocessing (EMDR) program in reducing post-traumatic stress disorder among patients with obsessive-compulsive disorder (among a sample of mothers of children with special needs referred from psychiatric clinics in Khartoum). The study sample consisted of (14) mothers, who were intentionally selected from those attending psychiatric clinics in Khartoum, and suffering from obsessive-compulsive disorder as a result of post-traumatic stress disorder after being informed that their children have special needs. Their ages ranged between (35-40) years. Participation in the treatment program was approved based on the psychiatrists' orientations for them to attend the program to complete treatment after stopping medication. The Yale-Brown Obsessive Compulsive Scale was used and applied to the study sample before and after the program, as well as during follow-up. To achieve the study objectives, the EMDR program was applied to reduce post-traumatic stress disorder symptoms. It was prepared by the researcher and lasted for two months from January 1st (2023) until the end of February of the same year. The researcher applied the study tools before and after the program. The data was analyzed using the Statistical Package for Social Sciences (SPSS). The study reached the following results: The first hypothesis indicated statistically significant differences at the significance level ($\alpha=0.05$) in obsessive thoughts among the study sample between the pre-test and post-test due to the EMDR program. The training program showed an effectiveness of (74.7%) in reducing their obsessive thoughts. The result of the second hypothesis also indicated statistically significant differences at the significance level ($\alpha=0.05$) in compulsive acts among the sample between the pre-test and post-test, attributed to the EMDR program. The training program showed an effectiveness of (74.9%) in reducing the compulsive acts associated with post-traumatic stress disorder among the sample. The follow-up results indicated no statistically significant differences at the significance level ($\alpha=0.05$) in obsessive thoughts among the sample between the post-test and follow-up test. There were also no statistically significant differences at the significance level ($\alpha=0.05$) in compulsive acts among the sample between the post-test and follow-up test, indicating the effect and continued effectiveness of the training program during the follow-up stage. In light of these results, the study recommended conducting further studies on the effectiveness of the EMDR program in reducing post-traumatic stress disorder symptoms in patients with obsessive-compulsive disorder with a sample of males or other age groups to reduce their obsessive-compulsive acts.

KEYWORDS

Post-traumatic stress disorder, Obsessive-compulsive disorder, Mothers of children with special needs, Eye movement desensitization and reprocessing

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1. Introduction

A mother's joy at the birth of her new child can quickly turn to anxiety, fear, and disappointment upon discovering her child has a disability or special needs. This can be a traumatic shock for the mother and make her prone to mental illness (Greisberg, 2005). Traumatic and threatening experiences can negatively impact one's mental health. Traumatic events threaten the normal personality and behavior of individuals, making them a burden on themselves and society. Depression, anxiety, and obsessive-compulsive disorder are associated with witnessing and experiencing traumatic events (Takafumi et al., 2005).

Obsessive-compulsive disorder is a type of anxiety disorder that shares symptoms with other disorders. A little anxiety can increase alertness and performance, but too much impairs functioning as the individual becomes consumed by obsessive thoughts and compulsions. Treatment is needed for the person to live normally (Calley, 2009). OCD greatly affects human relationships and social life, causing tension, anxiety, and depression. The individual becomes immersed in repetitive compulsions or obsessive thinking, neglecting other life responsibilities (Aslani et al., 2014).

Due to the diversity of mental illnesses and disorders, treatment methods have also diversified. The psychologist must rely on scientific methodology and proven knowledge to develop effective treatment programs (Lipike, 2000). The researcher has chosen to use EMDR (Eye Movement Desensitization and Reprocessing) therapy to reduce OCD symptoms in mothers of children with special needs, due to its rapid and effective results.

EMDR was developed by Francine Shapiro in the late 1980s/early 1990s to effectively treat traumatic situations. It has been widely used to treat a range of psychological problems, traumatic events, and painful memories (Aslani et al., 2014). EMDR involves three key aspects: the latent memories behind the current problem, current situations and positive circumstances to bring the client to psychological health, and re-storage of information in memory in a positive way appropriate for adaptive future behavior (Lipike, 2000). The researcher has designed an EMDR treatment program incorporating these key aspects to reduce obsessive thoughts in the study sample.

2. The Statement of the Problem

Obsessive-compulsive disorder in general is a major source of anxiety, depression and fears, and affects a person's well-being and adaptation. It also restricts the vital sphere of the individual and confines them to a narrow scope, and in some severe cases can lead to complete paralysis of the will, so that the sufferer cannot live a normal life. Therefore, OCD is a debilitating disorder that requires therapeutic intervention to limit it and its dangers at both the individual and societal levels.

The problem becomes even more dangerous when we talk about a sample of mothers of children with special needs suffering from this disorder. Based on my specialization in mental health and special education, I have noticed during my frequent visits to special education centers in Khartoum to follow up my students in practical education, one of them complained about the lack of improvement and response of children to some behaviors and learning skills. I investigated further and learned from the centers' administration that their mothers' behaviors were obsessive and abnormal.

After interviewing them, the problem became clear - they were suffering from obsessive-compulsive disorder. After consulting with their doctors at the clinics where they receive treatment, it was confirmed that they have OCD as a result of post-traumatic stress disorder after giving birth to a disabled child. Agreement was reached with the doctors on treating them, so they were referred to me.

Several studies in psychological literature have indicated a high prevalence of obsessive-compulsive disorder resulting from anxiety or traumatic disorders among individuals: 15% in a study by Beshir Mammary (2009), 50% in a study by Warda Belhseni (2011), 52% in a study by Al-Naggar et al. (2013), and 23% in a study by Livermore and Rapee (2014).

Therefore, programs need to be developed for this group that can successfully treat such disorders. The EMDR (Eye Movement Desensitization and Reprocessing) therapy program was chosen to reduce the level of this disorder. A study by Waleed Khaled (2013) confirmed that EMDR has been widely used to treat a wide range of psychological problems, traumatic situations, and painful memories experienced by individuals in their lives.

Mohammed Abdelrahman (2015: 497) also confirmed that EMDR is a promising treatment and effective method for processing these memories. Taysir Shawash (n.d.), Lipike (2000), Jongh & Broeke (2009), Waleed Khaled (2011), and Greyber et al. (2012) all agree that EMDR is an effective treatment for anxiety, personality disorders, phobias, eating disorders, depression, post-traumatic stress disorder, schizophrenia, obsessive-compulsive disorder, hyperactivity disorders, and learning difficulties.

Based on the above, this study aimed to reveal the effectiveness of the Rapid Eye Movement Desensitization and Reprocessing (EMDR) program in reducing post-traumatic stress disorder among patients with obsessive-compulsive disorder (among a sample of mothers of children with special needs referred from psychiatric clinics in Khartoum), whether in obsessive thoughts or compulsive acts.

More specifically, the current study seeks to answer the following main question: What is the effectiveness of the EMDR program in reducing post-traumatic stress disorder symptoms in patients with obsessive-compulsive disorder (among a sample of mothers of children with special needs referred from psychiatric clinics in Khartoum)?

The following sub-questions stem from the main research question:

1. Is there a statistically significant effect at the level ($\alpha = 0.05$) of the EMDR program in reducing post-traumatic stress disorder in mothers with OCD in psychiatric clinics in Khartoum?
2. Is there a statistically significant effect at the level ($\alpha = 0.05$) of EMDR in reducing post-traumatic stress disorder in mothers with OCD?
3. Are there statistically significant differences at the level ($\alpha = 0.05$) between the mean performance of the experimental group in the post-test and the performance in the follow-up stage on the obsessive thoughts scale?
4. Are there statistically significant differences at the level ($\alpha = 0.05$) between the mean performance of the experimental group in the post-test and the performance in the follow-up stage on the compulsive acts scale?

3. Study Objectives:

1. Design an EMDR therapy program to reduce post-traumatic stress disorder symptoms in patients with obsessive-compulsive disorder.
2. Evaluate the effectiveness of the designed treatment program in treating OCD in the study sample.

Study Importance:

- a. To the researcher's knowledge, it is one of the first local and Arab studies to apply a program to reduce post-traumatic stress disorder in mothers of children with special needs who have OCD using EMDR.
- b. Provide local and Arab libraries with the EMDR program to reduce post-traumatic stress disorder symptoms in patients with OCD.
- c. Provide mental health and special education professionals such as therapists and specialists with a refereed, practically applied program to treat OCD and associated manifestations like anxiety, depression, and tension.

Study Hypotheses:

The study aims to test the following hypotheses:

1. There are no statistically significant differences at the level ($\alpha=0.05$) between the mean performance of the experimental group subjects in the pre and post measurements on the obsessive thoughts scale associated with post-traumatic stress disorder among the study sample of mothers of children with special needs referred from psychiatric clinics in Khartoum due to the EMDR program.
2. There are no statistically significant differences at the level ($\alpha=0.05$) between the mean performance of the experimental group subjects in the pre and post measurements on the compulsive acts scale associated with post-traumatic stress disorder among the sample due to the EMDR program.
3. There are no statistically significant differences at the level ($\alpha=0.05$) between the mean performance of the experimental group in the post-test and follow-up on the obsessive thoughts scale.
4. There are no statistically significant differences at level ($\alpha=0.05$) between the mean performance of the experimental group in the post-test and follow-up on the compulsive acts scale.

The study limitations:

1. Subject limitations: Limited to the subject of: The effectiveness of eye movement therapy in reducing the severity of obsessive-compulsive disorder symptoms.
2. Human limitations: (14) patients diagnosed with obsessive-compulsive disorder.
3. Spatial limitations: Private psychiatric clinics in Khartoum.
4. Time limitations: January (2023).

Definitions of the key terms:

Effectiveness: The ability to achieve an intended outcome according to predefined criteria. Effectiveness increases the more the desired outcome is fully achieved (Badawi, 1982, p. 128).

Program: A set or sequence of activities or processes that should be carried out to achieve a specific goal. The program aims to organize the relationship between the objectives and projects of a plan as a method of implementation. This plan includes activities such as processes that aim to help the individual become aware of their behavior and problems, and train them to make appropriate decisions about the necessary solutions to problems, as well as develop their abilities and skills (Areebat, 2001:16).

Therapeutic EMDR Program: The program prepared by the researcher aims to reduce the symptoms of post-traumatic stress disorder, based on EMDR emerging from several theories including cognitive behavioral theory. Its therapeutic sessions included

the following strategies: cognitive restructuring, guided self-talk, exposure, muscle relaxation based on the educational method such as discussion, guided imagery, assertiveness training.

EMDR: One of the new therapies discovered by Francine Shapiro in the late 1980s and early 1990s, specifically in 1989, which deals effectively with traumatic situations. This therapy has been widely used to treat a wide range of psychological problems, traumatic events and painful memories experienced by the individual in their life (Waleed Khaled, 2013; Aslani et al., 2014).

EMDR in practice: This therapy is based on the idea that psychological trauma disrupts the mechanism of processing trauma-related information, so the trauma remains stored in a specific neural network separate from other networks, causing trauma symptoms. By moving the traumatized person's eyes in a certain way, the trauma-related information is processed, the isolated neural network resumes functioning by connecting with other networks, and thus the trauma disappears (Hogan, 2001; Barker & Barker, 2007). The researcher asks the client, after bringing up painful memories and negative perceptions associated with them, where do you feel the disturbance in your body? Then tells them: Watch my fingers (eye movements), so the client moves their eyes right and left following the therapist's right hand fingers, using the program's accompanying techniques, until improvement is reached.

Obsessive Compulsive Disorder (OCD): Recurrent, persistent thoughts or impulses that are intrusive and unwanted that cause anxiety or distress. Most people with OCD recognize that their obsessive thoughts and compulsive behaviors are irrational and excessive, but feel unable to stop them. Performing compulsive acts temporarily relieves the anxiety (Mohsen, 2016, p. 9).

Psychological trauma: Exposure to an extremely stressful event involving actual or threatened death, serious injury or threat to physical integrity of self or others. Witnessing such an event happening to others like family or friends (American Psychiatric Association, 1994).

Mothers of children with special needs: Ordinary mothers whose conditions changed due to circumstances in their life journey. In this study, they suffer from OCD due to post-traumatic stress after being informed their children have special needs, aged between 35-40 years.

The Theoretical Framework Section on EMDR

Eye Movement Desensitization and Reprocessing (EMDR)

EMDR is one of the integrative psychological therapies that relies on eye movement as an effective means to elicit traumatic experiences and situations, and associated information, sounds, thoughts, feelings, people, smells, etc., and reprocess and store them in a more positive way. This helps free the individual from the emotional experiences associated with these experiences, and alleviate their anxiety, tension and emotional distress (Shapiro, 2001; Shapiro & Maxfield, 2002).

Carrigan & Levis (1999) define it as: one of the integrative psychological therapies that uses eye movement as a means to activate the client's information processing system and reconstruct it properly after it has been encoded in memory. Taysir Shawash (n.d.), Lipike (2000), Jongh & Broeke (2009), Waleed Khaled (2011), and Greyber et al. (2012) all agree that EMDR is an effective treatment for anxiety, personality disorders, phobias, eating disorders, depression, post-traumatic stress disorder, schizophrenia, obsessive-compulsive disorder, hyperactivity disorders, and learning difficulties.

The effectiveness of this therapy stems from the behavioral and cognitive aspects it includes, which are exposure, cognitive restructuring, inoculation, and deep breathing. It also forces the client to think about the trauma and negative cognitions associated with it, and replaces these negative thoughts with positive ones. Without the use of bilateral eye movements, this therapy would be similar to exposure and cognitive therapy techniques, as it facilitates the client's processing of traumatic memories (Taha Abdelazim, 2008: 274).

Through the EMDR program, the researcher seeks to carry out a set of organized steps and procedures stemming from cognitive, behavioral, and psychodynamic theories. It includes a set of techniques (cognitive, behavioral, and emotional), in addition to the bilateral eye movement method (right and left, up and down) to elicit traumatic experiences and situations and reprocess and store them in memory more positively. The goal is to help individuals with post-traumatic stress disorder face stressful situations resulting from their children's disabilities, and cope positively with the problem, which contributes to reducing their post-traumatic stress disorder.

Obsessive-Compulsive Disorder

First: OCD linguistically:

Most linguistic definitions of obsession agree that "obsession" is the recurrence of something in the mind without reassurance or stability (Al-Ateeq, 1418 AH). As for "compulsion", it is defined in Lisan Al-Arab as: he compelled him, meaning he overpowered him. It is said "I took them by compulsion" meaning without their consent (Ibn Manzur, 1985: 15).

Second: The meaning of OCD idiomatically:

In the past, obsessive-compulsive disorder and anxiety were called together mental weakness or mental exhaustion, and some still believe that obsession and fear are largely interrelated, and that all obsessions are fears, and all fears are obsessive (Zahran, 2005: 32).

It is also called Monk Syndrome symptoms, and abbreviated as OCD. It is a chronic anxiety disorder usually characterized by recurring, pressing thoughts that the individual cannot get rid of, accompanied by compulsions and rituals that the individual cannot refrain from without severe anxiety (Shaheen, Basiony, 2012: 190). This term facilitated identifying two different aspects of this disorder: First, obsession, which refers to the content or substance of thought. Second, compulsion or coercion, which refers to behavior or actions (Coles, 1992: 239).

Aaron Beck and Tawfiq define OCD as intrusive, unwanted thoughts in the form of impulses that constantly impose themselves on the patient who cannot stop them. The content of obsessions generally relates to a distant danger, appearing as doubt or caution. An OCD patient may remain unsure whether they have adequately performed an action. Compulsive acts are defined as compulsive behavior that appears with repetition and intensity in the patient, accompanies them, takes control over them, and they cannot resist despite awareness of its absurdity and uselessness. Compulsive acts are ritualistic or stereotypical in execution, such as compulsive hand washing stemming from the patient's belief that they have not removed all dirt from their body, exposing them to physical illness (Beck 2000, Tawfiq 2000).

Bayer (2010: 25) defines obsessions in psychiatric terminology as "persistent, periodically recurring impulses, thoughts or images that a person suffers from at some time during distress or disturbance in an intrusive and inappropriate manner, resulting in marked distress." He defines compulsions as "repetitive behaviors such as hand washing, ordering, checking, or mental acts such as praying, counting, or repeating words to oneself, which the individual feels driven to perform in response to an obsessive thought or according to rules that must be applied rigidly. The behaviors or mental acts are aimed at preventing or reducing distress or dreaded events or situations."

The precise definition in the 10th International Classification of Mental Disorders (ICD-10) issued by the World Health Organization states that obsessions and compulsions fall under the category of neurotic disorders where psychological factors play a clear role. It defines them as: "Recurrent and persistent thoughts, impulses, or images that are experienced as intrusive and inappropriate and that cause marked anxiety or distress. The individual attempts to ignore or suppress such thoughts, impulses, or images, or to neutralize them with some other thought or action."

The relationship between obsessions and compulsions

Field results in the 4th edition of the Diagnostic and Statistical Manual (DSM-IV) indicate that more than 12% of patients exhibit obsessions and compulsive urges (Barlow, 2002). In a study by Wilner et al. (1976), they found that it is rare to find compulsive rituals without accompanying obsessive thoughts. Obsessions usually precede rituals, but sometimes obsessive thoughts are followed by performing rituals, especially with obsessive doubt. However, it is possible to find obsessions alone, as well as compulsion alone. It was found that about 69% of cases involve a mix of obsessions and compulsions, 21% of cases consist of just obsessions, and in 6% of cases there are solely compulsive rituals (David, 2004).

The theories explaining obsessive-compulsive disorder:

In his later writings (1913), Freud believed that the repressed drive in obsessive-compulsive neurosis is the sexual drive. He pointed to the role of early sexual experiences in the development of obsessive-compulsive neurosis. He mentioned that it arises as a result of a person being exposed to a painful sexual experience involving sexual aggression or harassment in their early childhood. The ego protects itself from this repressed idea through various kinds of thoughts, compulsive acts or fears such as fear of uncleanness and fear of people. He also believed that compulsive behavior arises from training centered on excessive and obsessive emphasis on cleanliness matters in early childhood. Therefore, he called it the oral personality based on the name of the stage during which it is formed.

Freud saw that those suffering from obsessive-compulsive neurosis, if prevented from performing their compulsive actions and motions such as hand washing, frequent bathing, and repeating ablution, feel severe anxiety. They cannot avoid this anxiety except by resuming these motions or compulsive acts. Freud noticed from this that these compulsive motions serve to

conceal anxiety. Patients perform these motions to avoid feeling anxiety. So symptoms in obsessive-compulsive neurosis have replaced anxiety (Yahya, 2012; Youssef, 2001; Freud, 1985).

Cognitive Theory:

The cognitive model in explaining OCD is based on some assumptions. First, non-clinical individuals (non-patients) face obsessive thoughts similar in content and form to the obsessions and compulsions suffered by OCD patients. It sees that the incorrect and negative interpretation of thoughts causes an increase in their frequency and density, transforming them into obsessive thoughts. OCD patients also have irrational beliefs like the individual's responsibility to prevent future harm to themselves and others, and increased feelings of guilt (Rajz, Foa, 2002). The second assumption sees that OCD patients suffer from cognitive distortion manifested in a slow, vicious cycle. What activates this cycle is excessive, unnatural arousal that keeps the patient in constant anticipation, leading to compulsively performing certain rituals. Breaking this vicious cycle is done by dealing with the patient's beliefs (Dalil, 2015).

Social Theory:

Proponents of social learning theory believe that if a child sees their father or mother repeatedly performing some compulsive acts (like motor rituals, checking, hoarding, etc.), they store the experience in their mind. If they come under psychological or social pressure, they quickly imitate the father or mother as a means of dealing with this pressure. Disorders are not necessarily the product of hidden, closed forces; they may result from normal processes like incorrect learning from influential surroundings and inability to distinguish imagination from reality. The content and outputs of thinking represent an illusion derived from false premises. Behavior may be dysfunctional because it is built on irrational attitudes and beliefs that may result from flawed reasoning based on insufficient or incorrect information (Beck, 2007; Abdel Hadi, 2012).

The causes of obsessive-compulsive disorder

Causes of Obsessive-Compulsive Disorder: There are many, we will summarize the following important ones:

1. Physiological causes

Related to the nervous system and brain electrical activity. Research has indicated that the causes of OCD are problems in communication between the front part of the brain responsible for feeling fear and danger, and the deeper structures of the basal ganglia that control one's ability to start and stop thoughts. These brain structures use the neurotransmitter serotonin, and OCD is believed to be associated with low serotonin levels (Perez, 2006).

2. Genetic causes

The individual inherits a predisposition for the disorder, not the disorder itself, because the genetic factor is one of multiple interconnected factors (Musa, El-Dosouky, 2013). The genetic factor plays an important role in the development of OCD. It was found that some children of OCD patients suffer from the same disorder, as do siblings. Apart from other family members who have an obsessive personality.

3. Causes related to the social and cultural environment

Sullivan believes that social and cultural factors play a role in the emergence and development of compulsive symptoms. He stresses that preoccupation of thought and responsibility in childhood makes the individual prone to OCD (Al-Anzi, 2007).

The National Collaborating Centre for Mental Health (2006) also listed factors that may cause OCD:

1. Family tension and disruption may be a source of stress causing OCD.
2. Adverse life events and difficulties increase symptoms. Life events may include starting a new school or university, moving houses, failing to marry, and health problems (Abdel Hadi, 2012).

The researcher believes that these latter causes are what has been revealed in the study sample.

The literature review section:

Previous Studies and Research on EMDR in Treating Some Trauma and Painful Memory Disorders and Related Variables. The researcher did not find many studies on the exact same topic, indicating the novelty of the study to her knowledge.

Nakano (2013) Study:

Title: Evaluation of the Eye Movement Desensitization Procedure Through the Internet for Resolving Distressing Memories

The study aimed to identify the effect of an EMDR online treatment program in treating distressing memories in a sample of 305 female university students with an average age of 18.69 years. 60 students agreed to enter the treatment program and were divided into one experimental group and two control groups of 20 students each, randomly assigned. The experimental group was given usernames and passwords to access the treatment website and trained on how to log in and interact. The study used a trauma experiences scale in addition to the treatment program. Results showed no real efficacy of the online treatment program in treating distressing memories. The researcher recommended incorporating an information processing element into the program to make it really effective (Aslani et al., 2014).

Greyber et al. (2012) Study:

Title: Eye Movement Desensitization and Reprocessing, Posttraumatic Stress Disorder, and Trauma: A Review of Randomized Controlled Trials with Children and Adolescents.

The study aimed to identify the efficacy of EMDR in treating psychological trauma and PTSD in children and adolescents by reviewing randomized controlled trials conducted in this regard on child and adolescent samples published between 1998-2010. After a thorough review of the literature, there were 5 studies that used trauma and PTSD scales and structured EMDR treatment programs. Results showed that EMDR is a promising and effective treatment for trauma and PTSD in children and adolescents (Aslani et al., 2014).

Farkas et al. (2010) Study:

Title: Effectiveness of EMDR Therapy for Traumatized Adolescents

The study aimed to reveal the efficacy of EMDR in treating trauma in a sample of 40 adolescents aged 19-21 years who experienced abuse, trauma, and parental maltreatment, selected randomly. After applying the study tools, 7 students were excluded for not experiencing trauma. The sample was divided into an experimental group of 17 adolescents and a control group of 16 adolescents after signing consent forms to participate in the program. The study used an abuse experiences scale and an EMDR program. Treatment lasted 12 weeks at 2 sessions per week. Results showed significant tangible improvement in the experimental group, indicating EMDR efficacy in treating adolescent trauma (Liverach & Rapee, 2014).

The commentary on the previous studies

Due to the novelty of EMDR in treating psychological trauma, the researcher did not find many studies with this research aim. However, all the studies presented by the researcher are related to the research topic. There was diversity in the samples, as Nakano (2013) studied treating distressing memories in a sample of female university students, while Greyber et al. (2012) focused on children and adolescents. Also, Farkas et al. (2010) studied adolescents. The program used was EMDR in all mentioned studies, appropriate for the respective samples. The results indicated the importance of the program, except for Nakano (2013)'s study, which led the researcher to recommend incorporating an information processing element into the program to make it really effective. The current study is superior in measuring the follow-up effect of the program, which allowed it to assess the program's effect and efficacy in EMDR.

3. Research methodology

The nature and therapeutic goals of the research required using a quasi-experimental approach. This type of quasi-experimental methodology is used when the researcher cannot fully control the research variables. "The quasi-experimental design provides an alternative to experimental designs in that it can be applied to field situations and does not require the experimenter to have absolute control over the experimental variables" (Homsí, 1991: 172). A one-group pretest-posttest design was used in this research. This design is: pretest - treatment - posttest. The effect of the treatment is determined by the change in scores between the pretest and posttest for each method separately, and comparing the changes between the groups (Ibid., p. 159).

Research Sample:

The sample consisted of 14 patients aged between 35-40 years, selected purposively from patients diagnosed by psychiatrists as having OCD.

Research Tools:

First: Yale-Brown Obsessive Compulsive Scale

Effectiveness of the Rapid Eye Movement Sequential Therapy Program in Reducing Post-Traumatic Stress Disorders in Individuals with Obsessive-Compulsive Disorder: A Sample of Mothers of Children with Special Needs Referred from Psychological Clinics in Khartoum

To measure OCD in the study sample, the Yale-Brown Obsessive Compulsive Scale (Goodman et al., 1989) was used. In its initial form, the scale consisted of 10 items in two dimensions: obsessive thoughts and compulsive acts, with five domains for each dimension and five items covering each domain.

Scale Validity: The researcher presented the scale to 7 reviewers who are psychology and psychotherapy professors at Sudanese universities and hospitals to ensure the validity of the scale items and their suitability for measuring what the scale was designed for. The reviewers recommended modifying some items. The final version of the scale consists of two main dimensions: obsessive thoughts and compulsive acts, with five domains for each dimension and five items per domain. The final number of items was 50, suitable for measuring OCD. The following table shows the scale domains, dimensions and number of items:

Table No. (1): The main dimensions of the Yale Brown Obsessive Compulsive Scale and number of its items

dimensions	Obsessive Thoughts	Number of Items
1	Amount of time occupied by obsessive thoughts	5
2	Amount of interference caused by obsessive thoughts in social and occupational activities	5
3	Amount of distress associated with obsessive thoughts	5
4	Amount of effort to resist obsessive thoughts (regardless of success)	5
5	Amount of control over obsessive thoughts	5

Second Dimension	Compulsive Actions	
1	Amount of time spent performing compulsive actions	5
2	Amount of interference caused by compulsive actions in social and occupational activities	5
3	Amount of distress if compulsions are prevented	5
4	Amount of effort to resist compulsions (regardless of success)	5
5	Amount of control over compulsions	5
Total		50

The reliability of the Yale Brown Obsessive Compulsive Scale was verified using the test-retest method with a time interval of two weeks. The scale was applied to a sample of (14) mothers suffering from obsessive compulsive disorder from outside the current study sample. After calculating the correlation coefficient between the two applications, the reliability coefficient of the total score was (0.89), which supports the possibility of using it in the current study.

Here is the translation:

Table No. (2) The reliability coefficients for each dimension of the scale.

Reliability	Items	No.
0.90	Amount of time obsessive thoughts occupy	1
0.75	Amount of interference obsessive thoughts cause with social and occupational activities	2
0.85	Amount of tension and anxiety accompanying obsessive thoughts	3
0.80	Amount of effort to resist obsessive thoughts (regardless of success)	4
0.83	Amount of control over obsessive thoughts	5
0.91	Amount of time spent performing compulsive rituals	6
0.81	Amount of interference compulsive rituals cause with social and occupational activities	7
0.83	Amount of tension/anxiety when compulsions are prevented	8
0.90	Amount of effort to resist compulsions (regardless of success)	9
0.80	Amount of control over compulsive rituals	10
0.90	Total score of scale	

Here is the English translation:

Proposed Program for Sequential Eye Movement Desensitization and Reprocessing\ Prepared by the researcher

Precautions for the treatment program:

When using this treatment, it should be taken into account that there are clients with multiple problems and psychological disorders. In this case, these problems should be classified into groups, so that problems that have very similar causes are grouped together in one group, and separate sessions should be devoted to each group. The therapist can give the client the freedom to choose which problem to start treatment with (Shapiro, 2001: 78). Since the sample of this study was selected purposively, problems that have very similar causes have been selected in the study group, so that the required treatment can be carried out accurately.

Objectives of the treatment program:

1. To treat the client's traumatic memories, and reduce the residual effects that cause him discomfort.
2. The aim of EMDR therapy is that this therapeutic methodology allows beneficiaries of this psychological treatment to develop more adaptive coping mechanisms according to a treatment protocol proposed by the therapist.

The specific objective of the treatment program:

1. EMDR therapy is designed to engage any one of these sensory modalities so that the client can access all channels of the trauma network during treatment.

The steps of the program:

Session duration: 40 minutes per session

Number of sessions: 16 sessions at 2 sessions per week for 2 months

The sessions go as follows:

1. Client medical history

Simply tell me a little about what happened just before the traumatic event up until the present. (2 sessions)

2. Preparation for the therapeutic encounter:

Establishing a good therapeutic relationship with the client, educating the client about their symptoms and the treatment program, and training them in skills that help with distress tolerance and self-control. (2 sessions)

3. Assessment phase:

The traumatic memories and shocking situations are identified to start processing them, which take the following three sensory forms:

- Visual: In the form of visual memories and images.
- Cognitive: In the form of negative and disturbing thoughts related to the traumatic situation.
- Bodily sensations: And each client has a different place in the body that carries these sensations. (These sensory forms take 2 sessions)

4. Desensitization phase:

Using dual attention and stimulation in the form of eye movements along with other therapeutic interventions. It goes as follows:

- The therapist asks the client after bringing up the traumatic memories and negative perceptions associated with the trauma.
- He instructs him to bring up the traumatic memories and negative perceptions associated with them, and to identify where he feels the disturbance in his body.
- Then he instructs him to watch the therapist's fingers (eye movements). This is by having the client move his eyes right and left following the movement of the therapist's right hand fingers.
- The stimulation phase for the client, in which if he succeeds the therapist encourages him to do better in the treatment. After the stimulation he moves his eyes right and left following the movement of the therapist's right hand fingers.

- The therapist instructs: (Blink your eyes, and take a deep breath) then slowly let it out.
- After that the therapist asks him how he feels now?
- If the result of that is positive the therapist instructs him to continue the movement. (This phase takes 4 sessions).

5. Reprocessing phase:

It aims to strengthen the positive cognition designed to replace the negative cognition associated with the memory. For example, if his perception is negative: like saying "I am wronged", it changes to the positive perception "I am strong". (1 session).

6. Body scan phase:

Its goal is for the patient to inform the therapist about any remaining disturbances in bodily sensations. The treatment is that the therapist says to the client: Close your eyes, and remember the original memory, then open your eyes, and follow my fingers (eye movements), then draw the client's attention to different parts of his body, starting with the head and going down to the other parts, saying to him: Tell me if you find any tension anywhere, or an unusual sensation, while continuing to reprocess any negative sensation until positive improvement. Bodily sensations appear to the therapist as: fatigue, sweating, and pale skin. (2 sessions).

7. Closure phase:

- It aims for the patient to be in a state of emotional balance at the end of the therapy session.
- And the body scan is free of disturbances and negative sensations.
- Summarizing the session; so that the client understands how the processing of the information he feels disturbed by and needs treatment occurs.
- The therapist prepares the client for what he will encounter between sessions, such as: disturbing images, thoughts and feelings that may appear between sessions when the mind processes the trauma during this period.
- The client records all memories and negative thoughts; because this helps him be close to the disturbance, and also benefits the therapist to identify new goals for future therapy sessions. (2 sessions).

8. Re-evaluation phase:

Each therapy session begins with this phase; to ensure the continuity of the therapeutic process and identify new treatment goals. Some tools and scales are applied to measure the level of anxiety, stress, and the client's feelings towards the traumatic situation. (1 session).

The techniques used in the program:

The behavioral, emotional, and cognitive techniques. These techniques are:

- Exposure
- Relaxation
- Reinforcement
- Self-Assertiveness
- Distraction
- Systematic Desensitization
- Modeling
- Role playing
- Role Reversal
- Debating
- Emotional Abreaction (Catharsis)

- Self-Presentation
- Imagination
- And Cognitive Restructuring techniques including: Logical persuasion and learning the ABC model, Stop Thinking (sometimes called Thought Stopping), Self-Talking, Problem Solving Approach, Self-Control.

The study results:

The presentation of the result of the first hypothesis: There are statistically significant differences at the level of significance ($\alpha = 0.05$) between the mean scores of the research sample on the Yale-Brown Obsessive Compulsive Scale before and after applying the EMDR therapy program (pre-test measurement) and after it (post-test measurement) in favor of after applying the program (post-test measurement) for the sample individuals. To test this hypothesis, the researcher used the Wilcoxon test, and Table (3) shows the results of this procedure.

Table 3: Mean and standard deviation of pre-test and post-test scores on the obsessive thoughts scale related to cleanliness among individuals in the experimental sample

Test	N	Mean	Standard Deviation
Pre-obsessive Thoughts	14	18.62	2.15
Post-obsessive Thoughts	14	12.58	1.71

Table 3 shows apparent differences in the mean scores between the pretest and posttest for obsessive thoughts. To determine the significance of these differences, the Wilcoxon Ranks Test for paired samples was conducted between the pretest and posttest scores. Table 4 shows the results of this procedure.

The result of the first hypothesis

Presenting the result of the first hypothesis: For table No. (4) showing the results of Wilcoxon’s test for paired samples between pre-test and post-test measurements of obsessive thoughts scale.

Obsessive thoughts ranks	N	Mean Rank	Sum of Ranks
Positive ranks	15	8.00	120.00
Negative ranks	0	.00	.00
Ties	0	-	-
Total	15	-	-

Z	-3.438
Sig.	.001
(Pre-test - Post-test)	

It is noted from Table (4) that the average positive ranks reached (8) and this average is statistically significant, as the value of (z) (-3.438) (which is statistically significant at the level ($\alpha = 0.01$), i.e. there are statistically significant differences in obsessive thoughts among the examinees. Between the pre-test and the post-test, the table shows that the differences were greater for the pre-measurement, which indicates that the program contributed to a decrease in obsessive thoughts that cause post-traumatic stress disorders among the sample members. Table (5) shows the effectiveness of the rapid eye movement training program in decreasing obsessive thoughts that cause post-traumatic stress disorders among the sample members.

Table No. (5) shows the effect of the effectiveness of the rapid eye movement training program in reducing obsessive thoughts that cause post-traumatic stress disorder among the sample members.

Scale	Value (Z)	Value (Z ²)	Value (4 + Z ²)	Value (η^2)
Yale-Brown Obsessive Compulsive Scale	-3.438	11.82	15.82	0.747

The table number (5) shows that the value of eta squared was (0.747), indicating the effectiveness of the Rapid Eye Movement program in reducing obsessive thoughts that cause post-traumatic stress disorders in the sample individuals.

Hypothesis 2: There were no statistically significant differences at a significance level of ($\alpha = 0.05$) between the mean performance of individuals in the experimental group in pre and post measurements on the Yale-Brown Obsessive Compulsive Scale in the application of the Rapid Eye Movement program/therapy to reduce post-traumatic stress disorders in the sample individuals. To test the hypothesis, the mean scores and standard deviations of the individuals in the experimental group in the pre and post measurements on the Obsessive Compulsive Behavior Scale were calculated, and the following table illustrates the results of this procedure.

Table No. (6) shows the arithmetic means and standard deviations of the scores on the pre-test and post-test on the Bell Brown scale of coercive actions of the rapid eye movement training program among the sample members.

Measurement	N	Mean	Standard Deviation
Pre OCD Actions	14	18.80	2.145
Post OCD Actions	14	12.40	2.063

Table 6 shows apparent differences in the means between the pre-test and post-test compulsive actions. To determine the significance of these differences, the Wilcoxon test was conducted for related samples.

The result of the second hypothesis:

Table 7 shows the results of the Wilcoxon test for related samples between the pre-test and post-test measurements of the compulsive actions scale.

Table (7): Wilcoxon Signed-Ranks Test Results for Compulsive Acts Scale

Measure	Rank Type	N	Mean Rank	Sum of Ranks	Z-value	Significance Level
Pre-Post	Positive Ranks	14	8	120	3.462-	0.001
	Negative Ranks	0	0	0		
	Correlations	0	-	-		
	Total	14	-	-		

"As observed from Table (7), the mean rank of positive values is (8), which is statistically significant. The Z-value is (-3.462), indicating statistical significance at the $\alpha = 0.01$ level. The table shows that the differences were more pronounced in the pre-test measurement, suggesting that the program contributed to a reduction in compulsive behaviors causing post-traumatic stress disorder among the sample individuals. The compulsive acts between the pre-test and post-test showed a significant decrease, indicating the effectiveness of the program in addressing these issues."

Table (8) illustrates the effectiveness of the rapid eye movement training program in reducing compulsive acts causing post-traumatic stress disorder among the sample individuals.

Measure	Z-value	Z-value ²	4 + Z-value ²	Eta-squared
Compulsive Acts Scale	3.462-	11.985	15.985	0.749

The table (8) demonstrates that the Eta-squared value was 4.9%, indicating the effectiveness and impact of the rapid eye movement training program in reducing compulsive acts and their association with post-traumatic stress disorder among the sample individuals.

Third Hypothesis Results

Thirdly, the results of the third hypothesis indicate that there are no statistically significant differences at the $\alpha = 0.05$ significance level between the mean scores of the experimental group individuals in the post-test and follow-up measurements on the obsessive thoughts scale. To examine this hypothesis, the arithmetic means and standard deviations of the experimental group's scores were calculated and presented in Table (9).

Table (9): Arithmetic Means and Standard Deviations

Measurement	N	Mean	Standard Deviation
Post-test	14	12.6	1.724
Follow-up	14	12.4	1.549

Table (9) displays the arithmetic means and standard deviations for the obsessive thoughts scale. It shows that there are apparent differences in the means between the post-test and follow-up measurements. To determine the statistical significance of these differences, a Wilcoxon Ranks Test was conducted, and the results are presented in the following table.

Table (10): Wilcoxon Ranks Test Results

Measure	Ranks	N	Mean Rank	Sum of Ranks	Z-value	Significance Level
Post-test - Follow-up	Positive	2	1.5	3	-1.342	0.18
	Negative	0	0	0		
	Correlations	12	-	-		
	Total	14	-	-		

The Wilcoxon Ranks Test results will provide further insight into whether these apparent differences are statistically significant, helping to draw conclusions about the effectiveness of the rapid eye movement training program in reducing obsessive thoughts.

As observed from Table (10), the mean rank of positive values for obsessive thoughts is 1.5, and the Z-value is -1.342, which is not statistically significant at the $\alpha = 0.05$ level. This indicates that there are no significant differences in obsessive thoughts between the post-test and follow-up measurements for the sample individuals.

Fourth Hypothesis: No Significant Differences in Compulsive Acts

The fourth hypothesis states that there are no statistically significant differences at the $\alpha = 0.05$ significance level between the mean scores of the experimental group individuals in the post-test and follow-up measurements on the compulsive acts scale.

Table (11): Arithmetic Means and Standard Deviations for Compulsive Acts Scale

Measurement	N	Mean	Standard Deviation
Post-test	14	12.4	2.063
Follow-up	14	12.2	2.007

Analysis:

Table (11) presents the arithmetic means and standard deviations for the compulsive acts scale. It shows apparent differences in the means between the post-test and follow-up measurements. To determine the statistical significance of these differences, a Wilcoxon Ranks Test was conducted, and the results are as follows:

The result

Table (12): Wilcoxon Ranks Test Results for Compulsive Acts Scale

Measure	Ranks	N	Mean Rank	Sum of Ranks	Z-value	Significance Level
Post-test - Follow-up	Positive	3	2	6		
	Negative	0	0	0	-1.732	0.083
	Correlations	12	-	-		

The results presented in Table (12) indicate that there are no statistically significant differences in compulsive acts between the post-test and follow-up measurements for the experimental group. The mean rank of positive values for compulsive acts is 3, and the Z-value of -1.732 is not statistically significant at the $\alpha = 0.05$ level. This suggests that the observed differences in compulsive acts are not significant enough to be considered meaningful from a statistical perspective.

Discussion of Study Hypotheses and Recommendations:

The results pertaining to the first and second hypotheses indicate statistically significant differences in obsessive thoughts among the study's sample between the pre-test and post-test measurements. The differences were more pronounced in the pre-test, suggesting that the treatment program contributed to a reduction in obsessive thoughts and compulsive acts associated with post-traumatic stress disorder in the examined individuals.

This outcome can be attributed to the suitability of the rapid eye movement program and its reprocessing approach in mitigating the risk of post-traumatic stress disorder. The program's procedures, strategies, and activities were tailored to align with the principles of cognitive-behavioral therapy, aiming to reduce obsessive-compulsive symptoms.

The experimental group participants benefited from the program's activities, enabling them to handle life situations more naturally. These activities increased their awareness of the changes in their thoughts and behaviors, positively impacting their self-concept and self-esteem. Additionally, their interactions with their disabled children improved, contributing directly to the study's therapeutic goal.

The researcher observed that individuals participating in the treatment program applied the activities they learned during the program to natural life situations at home and within their families. They explicitly expressed their benefit from these activities outside the therapy sessions, such as using relaxation strategies when feeling anxious, understanding and identifying intrusive thoughts, and then attempting to eliminate them through various methods. They occupied their free time with useful activities and positively interacted with their disabled children, exhibiting improved behavior and giving. These individuals became more engaged during the counseling sessions after three weeks of starting the program, indicating that they began to feel the program's benefits and its positive impact in reducing obsessive-compulsive symptoms that had plagued some of them for several years. This facilitated the researcher's task in implementing the program during the final weeks.

This result aligns with the findings of studies by Greyber et al. (2012) and Farkas et al. (2010). The latter study's results indicated the effectiveness of the eye movement control and information reprocessing therapy program as a promising and effective treatment for psychological trauma and post-traumatic stress disorder in both children and adolescents.

Discussion of Hypotheses Three and Four:

The results regarding hypotheses three and four indicate that there were no statistically significant differences between the mean scores of the experimental group in the post-test and follow-up measurements on the obsessive thoughts scale and the compulsive acts scale related to hygiene. These findings suggest that the effectiveness of the counseling program extended beyond the implementation phase, as the gains achieved from the post-traumatic stress disorder reduction program persisted into the follow-up stage after the treatment.

This outcome can be attributed to the participants' enthusiasm and determination to overcome the disease and its symptoms. They worked diligently to avoid relapsing or surrendering to the illness that had plagued some of them for several years. The follow-up evaluation confirmed the effectiveness of the post-traumatic stress disorder reduction program.

This result aligns with the findings of the study by Farkas et al. (2010), which emphasized the continuity of the therapeutic effects of this program. The study concluded that the eye movement control and information reprocessing therapy program is a promising and effective treatment for psychological trauma and post-traumatic stress disorder in both children and adolescents, even after the follow-up and reprocessing stage.

Suggestions and Recommendations:

First: It is essential to raise awareness among mothers of children with disabilities in centers through short courses and special brochures about obsessive-compulsive disorder, its detection methods, and its negative impact on social relationships between mothers and society and between mothers and their children. These resources should also provide guidance on how to be patient and cope with adversity to improve the well-being of their children and facilitate their learning without obstacles.

Second: Implement rapid eye movement programs to reduce post-traumatic stress disorder and alleviate symptoms of similar disorders, such as obsessive-compulsive disorder related to suspicion, fear of death, and repetitive handwashing.

Third: Apply rapid eye movement and information reprocessing programs in psychiatric hospitals to a sample of males and children.

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