

Effectiveness of eye movement desensitization and reprocessing treatment in relieving symptoms of post-traumatic stress disorder (PTSD) and related disorders (anxiety and depression) in a sample of women who were raped

Ait Guenissaid Naima^{1*}

¹ University of Blida2/ Lounici Ali, (Algeria), aitgueninaima7@gmail.com

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ABSTRACT:

Keywords:

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The study aimed to prove the efficacy of treatment desensitization and reprocessing by eye movements in relieving symptoms of post-traumatic stress disorder and its accompanying disorders, which we identified in both depression and anxiety in 10 cases of women who experienced rape. For this purpose, we used a set of scales (PCLS scale to measure PTSD, Beck scale for depression, Hamilton scale to measure anxiety, and dissociative experiences scale to exclude women with dissociative disorder as an antidote) in addition to the application of the standard protocol for desensitization and retreatment Through eye movements in its eight stages. The results revealed that there were statistically significant and clinically significant differences in the three scales (post-traumatic stress disorder, depression and anxiety) in favor of the pre-measurement. For rape, and the rest of the other past events and to establish the positive thoughts that the examinees wished to embody at the moment of the traumatic encounter, the current situations that continued to provoke turmoil among the subjects were targeted.

* Ait Guenissaid Naima

Introduction

The myth and power of eye movement desensitization and reprocessing treatment stemmed from the speed with which the clinician observed how patients were liberating themselves from the weight of feelings of shame, sadness, or frenzy that they had experienced for so many years. For mental health practitioners, the discovery of eye movement desensitization and reprocessing (EMDR) is among the most significant and confounding events 100 years after the discovery of psychoanalysis and 50 years after the discovery of antidepressants.

Being a confusing event because it is impossible for those practitioners who have formed in a classical way to accept the idea that moving the patient's eyes - while stimulating the most painful scenes in his life - is able to relieve this pain whatever the method, and yet there are at least 18 controlled studies that showed the effectiveness of this technique In the treatment of PTSD (we will discuss it in detail later), and all independent evaluations made by research societies such as the International Society for the Study of Post-Traumatic Stress Disorder (2000) and the American Psychiatric Association (2004) all classified EMDR as the most effective treatment for this disorder...

The procedural elements of the treatment of desensitization and reprocessing by eye movements include stimuli of weakening attention that trigger a physiological state that activates the information processing system, meaning that sensory stimulation facilitates the integration of multiple models of the hemispheres of the brain for partial memories when the memories are integrated, they lose their ability to produce re-enactment phenomena Experiencing and Uncontrolled Emotional Responses [Roques, 2004, p. 160].

Shapiro (2007) says that when we ask the patient to think of the traumatic outcome, we build a connection between his consciousness and the place in the brain where the information is stored. In each series of excitations (eye movements) we modulate the disturbed information more and more rapidly along the neural pathways Appropriate physiology to be solved correctly Example: solving a piece of disturbed information that has been targeted and retained in connection with the current adaptive information (it was not a mistake that raped me..) So one of the basic assumptions of this therapeutic technique is that the activation of the processing of traumatic memories leads naturally towards the adaptive information.

That is why, through this study, we tried to apply this new psychological treatment to the case of a girl who was a victim of rape in order to help her get rid

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of the weight of feelings of shame and guilt that feed her symptoms of post-traumatic stress disorder and its accompanying disorders (anxiety and depression) so that he can continue the other challenges that await her within family and community. This is all in order to confirm the effectiveness of this psychotherapy in excluding mental disorders in a sample of Algerian society

1-The Problem

The crime of rape is a form of crime that is characterized by the highest degree of violence against women, because of the psychological, physical, social, and relational effects of this crime on women and society.

It is an act of power and control that aims to subjugate another person to his desire by using threat, force, and coercion, explicit and implicit, for this reason, this type of sexual assault affects primarily the psychological and physical integration of the victim, and therefore it is considered a violent traumatic experience in which the victim is confronted in a way Violent, her biological and psychological death together, and therefore as long as rape is included in the major traumatic events, it will certainly generate a severe psychological trauma for its victims. (*Breslau et al, 199, p. 216*)

In this regard, Shapiro F. (2007) considers that the subjective awareness of helplessness and despair may remain physiologically registered under its raw form (ie, images, emotions, feelings, original thoughts of the traumatic event) in a memory network isolated from the rest of the networks that carry adaptive information, thus working This is what is known as a post-traumatic stress disorder, which is a disorder according to the Diagnostic Statistical Manual of Mental Disorders in its fifth edition that covers a group of pathological symptoms that appear after exposure to an event. Traumatic, consisting mainly of three symptoms of re-experiencing, avoidance, and substantive nervous activation, and post-traumatic stress disorder is often accompanied by other psychological symptoms. They suffer from another accompanying mental disorder, and in general, researchers in epidemiological research talk about a high percentage of disorders accompanying this disorder, especially anxiety and depression. Fear that develops secondary to a traumatic experience can be generalized to expand to other modes ((Schapiro, 2007, p. 389)

According to Schapiro's (2007) adaptive treatment model, PTSD is characterized by a disconnection between appropriate knowledge of the present and inappropriate emotions resulting from psychological trauma, and this makes its treatment difficult, as it is not enough to speak to rebuild this connection

between old emotions and Awareness of the present perceptions, and recounting them several times only exacerbates them because the emotions and physical responses associated with negative living with the traumatic experience remain unresolved due to the interruption of the treatment system, which becomes blocked for this, so he needs to return to work, and here lies the goal of desensitization treatment and reprocessing for Through eye movements, because this method does not need to narrate the details of the traumatic event for it to be digested by the information processing system.(InstitutFrancaisd'EMDR2010 P 65)

In this field, several studies have proven the efficacy and effectiveness of this treatment in alleviating the symptoms of post-traumatic stress disorder. For example, in a study conducted by Rothbaum (1997) on 18 women who were raped, all of them responded to the diagnosis of post-traumatic stress disorder, it was revealed that after 3 sessions of desensitization treatment and reprocessing by eye movements, 90% of the disorder was excluded in this sample, and with continued treatment, normal limits were reached compared to criteria measuring PTSD, depression, and dissociation. (Rothbaum, 1997p 312)

So, the key to psychological changes in the technique of desensitization and reprocessing through eye movements is based on facilitating the appropriate processing of the information, and this means creating new, more useful contacts, and based on the clinical application of this treatment, there are special aspects of this stored information that are used as goals in the treatment session, which are: The image, thoughts, emotions and physical sensations related to the traumatic event, in addition to the reference procedures for this technique, which include identifying the intensity of the evoked emotion using the SUD scale and the level of VOC, which measures the validity of the examinee's beliefs in his positive thoughts that he wishes to achieve. Also, the subject must be well prepared before focusing on the stored pathological substance, so that the treatment of the target substance begins by asking the examinee to focus at the same time on the appropriate stimuli (eye movements) and the components of the goal (image, negative thought, emotion, and physical sensation). And the treatment is achieved through chains of excitation of successive eye movements in addition to verbal exchanges with the examinee to determine the appropriate next target..(Institut Francais d'EMDR 2010 P 65)

Based on this study and based on the literature on psychological trauma, post-traumatic stress disorder, and desensitization treatment and reprocessing by eye movements, the researcher is trying to test the effectiveness of this new

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technique in eliminating and treating the symptoms of post-traumatic stress disorder represented in Re-experiencing, avoidance and substantive nervous activation in addition to its accompanying disorders that we identified in both depression and anxiety. To embody this perception and achieve this procedure, the researcher put the following questions to crystallize the problem further: Do the sample members suffer from post-traumatic stress disorder? Is there a clinical indication in the degree of symptoms of re-experiencing, avoidance, and substantive nervous activation? Do the sample members suffer from symptoms of depression and anxiety as co-occurring disorders? To the extent of investigation of desensitization treatment and reprocessing by eye movements of the symptoms of post-traumatic stress disorder and its accompanying disorders, therefore are there statistically significant and clinical differences between the pre-and post-treatment evaluation about: The total degree of post-traumatic stress disorder symptoms The degree of re-experiencing, the degree of avoidance, the degree of substantive nervous activation, the degree of self-scaling of the disturbed units, the sincerity of beliefs, and finally the degree of depression and anxiety?

2- Hypotheses

*Most of the subjects were characterized by high degrees of post-traumatic stress disorder. (With satisfactory significance in each of the degrees of re-experience, avoidance, and substantive neural activation)

*Most of the female subjects are characterized by high degrees of symptoms of co-occurring disorders (depression and anxiety).

* The application of the technique of desensitization and reprocessing by eye movements leads to the exclusion of symptoms of post-traumatic stress disorder and its associated disorders:

- There are statistically significant differences between the degrees of post-traumatic stress disorder symptoms and its three symptoms (re-experiencing, avoidance, and substantive nervous activation) before and after the application of the therapeutic technique.

-There are statistically significant differences between the degrees of the belief scale and the scale of disordered units before and after the application of the therapeutic technique.

-There are statistically significant differences between the pre-test and the post-test with regard to degrees of depression and anxiety.

3-Define concepts

3.1. Post-traumatic stress disorder

Post-traumatic stress disorder, according to the fifth classification of the Diagnostic and Statistical Manual of Mental Disorders, is included in the mental disorders resulting from the development of psychological trauma following the exposure of the individual to a traumatic event that carries with it a threat of death to his physical and psychological unity. This disorder consists mainly of three basic symptoms: Re-experiencing, avoidance, and symptoms of substantive neurostimulation, and to confirm the diagnosis of this disorder, these symptoms must last at least three months. It is procedurally embodied in this research by the scores obtained by the female subjects, as the total score that carries a clinical significance of the disorder is limited to between (44 and 60) on the PCLS test. It ranges between (21 and 35) and the symptoms of substantive nervous activation range between (15 and 25) degrees.

3.2. Associated disorders

They are pathological symptoms that coincide in appearance with the main symptoms of post-traumatic stress disorder symptoms, and in this study, they were identified mainly in the symptoms of depression and anxiety symptoms:

A) Symptoms of depression

They are pathological symptoms covering a depressive mood embodied in the verbal and non-verbal expression of sad emotions in addition to disturbances at the level of living functions, cognitive functions, voluntary functions and social functions. These symptoms are procedurally embodied in this study by the total score obtained by the subjects in the Beck test In his short form of Gharib Abdel Fattah, the lowest level of depression is between (0 and 4), the moderate level is between (5 and 7) the average level is between (8 and 15), and the severe level is between 16 and above.

B) Symptoms of Anxiety

These are pathological symptoms that cover an anxious mixture that is embodied in the verbal and non-verbal expression of anxious emotions, pressure and fear, in addition to disturbances at the neurological, cognitive and behavioral levels. These symptoms are embodied procedurally by the total score obtained by the subjects on the Hamilton anxiety test, which exceeds 15 degrees.

C) Desensitization Treatment and Eye Movement Reprocessing

It is a new treatment based on the emotional nervous current to desensitize and reprocess information with sensory stimulation through eye movements to facilitate rapid resolution of PTSD symptoms. Traumatic stress disorder is

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recorded in the nervous system under its four forms: images, thoughts, emotions and bodily sensations. The application of this treatment goes through eight stages: Phase one: case history, The second stage: preparation, The third stage: evaluation, Fourth stage: desensitization, Fifth stage: Installing positive thoughts Sixth stage: physical imaging, Seventh stage: closing, Eighth stage: Reevaluation.

4-The Importance and Objectives of the Research

Through this study, we aim to test the effectiveness of the technique of desensitization and reprocessing by eye movements in eliminating the symptoms of post-traumatic stress disorder and its most common comorbidities such as depression and anxiety in a group of women who have been exposed to rape trauma.

The importance of this work lies in highlighting the effectiveness of this new treatment in the field of psychological therapies for the clinician to be able to use, in addition to highlighting the new integrative approach to mental illness in general, psychological trauma and post-traumatic stress disorder. In particular, the interpretations under this approach. The new in the physiological field and the information processing system as a system for self-healing of all mental illnesses.

5-Study Design and Methodology

In our study, we chose a kind of quasi-experimental design, which is an individual design characterized by several advantages mentioned by Robert & Fortin (1982), the most important of which is that it allows the development of new techniques and the improvement of other existing ones, and this allows the analysis of rare phenomena, and the provision of data that may It pushes to reconsider the validity of existing theories and to highlight new angles about different phenomena. [Fortin et Robert, 1982, p134] We chose this simple A-B single design, which goes through two phases:

Phase A: In which the baseline level of the desired behavior is evaluated,

Stage B: In which the dependent variable or the treatment or intervention stage is included,

6- The Study Sample

We chose an intentional sample, consisting of 10 traumatized women, who had experienced rape. They were contacted at the Women in Moral Danger Center in Bousmail, and who accepted to participate in the study and benefit from treatment. The conditions for selecting this sample are as follows:

-Being raped, whether the aggressor is a stranger or a family member.

- Not receiving any kind of psychological treatment (except for respectful listening)
- No history of mental illness (especially dissociative disorders)
- No suicide attempts
- Not taking drugs.
- Accepting participation in the treatment, cooperating with the researcher, and performing some of the duties that are included in the home exercises.

7- Rsearch Tools

To test the hypotheses of the current research, the researcher tried to choose suitable tools whose purpose was to collect sufficient information and ensure the diagnosis of PTSD and its accompanying disorders, and to exclude dissociative experiences disorder as an antidepressant and reprocessing through eye movements in the research group. These tools were as follows: General and specific information about the traumatic event, post-traumatic stress disorder scale (PCLS), Beck depression scale, and Hamilton anxiety scale. Eye movements in the treatment of symptoms of post-traumatic stress disorder and its accompanying disorders. As for the fifth tool, which is the EED Dissociative Experiments Scale, we relied on it to exclude dissociative disorders as co-occurring disorders.

8- View results

8.1. Pre-measurement Results

A) Results of the first hypothesis: the subjects suffer from high degrees of post-traumatic stress disorder:

- Most of the subjects had high degrees of PTSD and its three symptoms (re-experiencing, avoidance, and objective neural activation:

Table n° 01: Distribution of females according to clinical significance of post-traumatic stress disorder degrees and its three symptoms.

	Clinical indication	repetitions	The ratio	the total
PTSD	There is no Clinically significant: less than 30	/	/	/
	Clinically significant :44-66	10	100	10

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The above table shows that all the ten female subjects obtained clinically significant scores in the post-traumatic stress test, where the percentage reached 100%, where the average of these scores clinically indicative of the injury of this sample to post-traumatic stress disorder $x = 76$ was thus fulfilled. On the transformation of the psychological trauma received by the female subjects into post-traumatic stress disorder as a result of the rape incident.

The results of the second hypothesis: Most of the female subjects suffer from high degrees of depression and anxiety disorder, as they are co-morbidities:

Table n° 02 Distribution of the sample members according to the clinical significance of the degrees of depression and anxiety disorder.

	Clinical indication	repetitions	The ratio	the total
Depression	There is no depression: 0-5	/	/	/
	moderate depression:5-7	/	/	/
	Severe depression; 16	10	100	10
anxiety	There is no anxiety0-5	/	/	/
	moderate anxiety6-14	/	/	/
	Severe anxiety15	10	100	10

The above table shows that all the ten female subjects obtained clinically significant scores in the depression and anxiety test, i.e. 100%, where the average of these scores clinically indicative of depression in this sample $x = 19.4$ and for anxiety $x = 27.4$, therefore the second and third hypotheses were fulfilled. It states that the research subjects suffer from depression and anxiety disorder as a comorbidity disorder with post-traumatic stress disorder.

The results of the pre-test PCLS test showed that all ten cases suffer from post-traumatic stress disorder with a high clinical significance, and this indicates the transformation of the psychological trauma that afflicted the research subjects as a result of the rape incident to which they were subjected to a chronic disorder, which is post-traumatic stress disorder.

The structure of this disorder in the research subjects is due to several reasons, including what is related to the nature of the traumatic event: the ten cases

of this study were subjected to rape, whether outside the home, as is the case in cases (1, 2, 3, 4, 7, 10) or Inside the house, which was supposed to be a safe and secure place, as is the case in cases (5, 6, 8, 9), meaning that the seriousness of the event to which the research subjects were exposed played a fundamental role in structuring the disorder, especially with regard to the psychological and physical danger that left behind it This incident (the loss of virginity, which in turn resulted in the loss of honor and dignity of the examinees) in addition to the existence of an emotional relationship with the aggressor, as is the case in cases (6, 8, 9) which are considered cases of incest

Without forgetting the role played by the post-traumatic stress disorder in the emergence of the disorder, as we noticed that all the research subjects had faced difficult circumstances after the rape incident, as they were transferred to the Center for Women in Moral Danger in Bou Ismail due to the family's refusal or abandonment of them, meaning that the degree of family support provided The examinations were almost non-existent

8.2. Application of the Standard EMDR Treatment Protocol

The researcher presented the protocol for the treatment of desensitization and retreatment by eye movements to four practitioners (psychotherapists, two psychiatrists) who obtained the European certificate in the treatment of desensitization and retreatment by eye movements, class of 2011 France. After it was translated from French into Arabic, the researcher obtained the approval of those specialized in this treatment.

The researcher followed in applying the standard protocol for desensitization treatment and retreatment through the movements of eight stages, and before presenting these stages to a selected exemplary case of 10 cases, we present in the following therapeutic targeting scheme for 5 typical cases:

Table n° 03 Therapeutic targeting scheme for five typical cases of the research group

targeting times	first case	second case	third case	Fourth case	Fifth case
past events	rape - experience - Abuse experience on the part of the father and older brother.	rape experience - No other traumatic events in the past	rape experience - Examined mother leaving home is 15 years old.	rape experience - No other traumatic events in the past	rape experience - She was beaten and ill-treated by her father.

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	- Experience of sexual harassment by uncle.		She was beaten and raped by her older brother		
Current trigger factors	Feeling guilt towards her family, and when praying and reading the Qur'an - Confronting people and men	Whenever the mother came to visit her and blamed her for what happened to her.	The mother's insistence that her daughter leave the center and return home.	Fear and anxiety when a new girl enters the center	Fear of returning home and forcing her to marry her cousin
future scenarios	Courage and calm when facing parents, especially the father and the older brother. Courage and patience when leaving the center to find work and housing alone.	Courage and calm to face family and relatives when they leave the center	Courage to face the brother when you come home.	Courage to face the brother and family when returning home	For the courage to face the cousin and the rest of the parents

In the following, we will present the course of the therapeutic protocol for a typical case of the research group, explaining the eight stages through which EMDR treatment is applied in its standard protocol.

Table n° 04 EMDR treatment course in its standard protocol for a typical case

Therapeutic sessions	stages of treatment	remedial measures
First and second session	case history stage	<p>1-Ensuring the adequacy of the EMDR treatment for the subject by verifying the safety standards:</p> <p>A- The level of the researcher's trust -a relationship with the subject: the response of the examinee was very positive, as (X) showed receptiveness to telling the truth of what she feels and the possibility of experiencing pain, helplessness and all the physical sensations associated with the rape incident, and the examinee also showed a willingness to continue the treatment until the last session and bear the share 90 minutes as long as this will free her from her suffering that has lasted for several years,</p> <p>b- Clinical presentation: -b</p> <p>*As for the ability to control breathing, the female suffers from rapid and shallow breathing, which has created a vicious cycle of negative thoughts and feelings that increases her suffering. She was therefore trained in diaphragmatic breathing, and at the end of the exercise a leaflet containing the training stages of breathing control was presented to be repeated outside the therapeutic part.</p> <p>*No suicide attempts were examined.</p> <p>Do not take medicines or drugs.*</p> <p>*Not receiving psychological treatment before rape</p> <p>* Social support for the examinee: her younger brother</p> <p>c-- Medical considerations: The woman examined does not suffer from any disease except for headaches in the head in the form of a migraine during her</p>

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		<p>menstruation, the first symptoms of which began after she was raped.</p> <p>d- Time considerations: Acceptance of the examinee and her readiness to continue the treatment. The last session is 90 minutes long.</p> <p>e- E- Building a therapeutic targeting scheme:</p> <p>past events:</p> <p>The rape incident •</p> <p>Experience of abuse on the part of the father and the older brother. •</p> <p>Experience of sexual temptation on the part of the uncle. •</p> <p>Current problem or current triggers:</p> <p>*Feelings of guilt towards the family when praying and reading the Qur'an.</p> <p>* Confronting people and the opposite sex when leaving the center.</p> <p>future scenarios:</p> <p>*Courage and calm when facing parents, especially the father and the older brother.</p> <p>*Courage and patience when leaving the center to find work and housing alone</p>
The third and fourth session	preparation stage	<p>Provide information about EMDR treatment - and how trauma occurs</p> <p>- Test eye movements with the subject in terms of the position of the intersection of two boats, the distance, speed and direction of the chains of excitement</p> <p>Develop coping strategies to help the - examinee settle down: The researcher used the train measurement technique, the safe place technique, and the keyword (mosque).</p>
	evaluation stage	

		<p>The researcher immediately proceeded to retrieve the components of the target memories and set a relative measurement base for the examined responses, for example:</p> <p>Rape experience:</p> <p>Image: the face of a mighty and powerful beast.</p> <p>Negative thought: I am helpless, disrespectful, without value or honor.</p> <p>Positive thought: I am just as respectable and educated as the others.</p> <p>The validity of the positive thought: 2 / 7</p> <p>Emotion naming: shame, guilt, a feeling of heat, and paralysis</p> <p>Agitation level: 10/10</p> <p>Physical location of sensations: paralysis of the right leg and hand, pain at the level of the head and genitals</p>
<p>From the sixth session to the ninth session</p>	<p>Stage 4 Desensitization</p>	<p>*Initiating the reprocessing procedure for the first stage of the treatment protocol, which is the past events :</p> <ul style="list-style-type: none"> -Restore and focus on the four components (image, negative thought, emotion, and physical sensation) -and Finger-stimulation chains have been initiated to move the eyes -Verbal return after each counseling series (take a deep breath and relax) - Feedback request after each excitation chain - Subject's feeling of relief after 9 sets of arousal chains and the arrival of the turbulent units 0/10 SUD
	<p>Fifth stage installation</p>	<ul style="list-style-type: none"> -Verification of the positive idea: the subject wished to say to herself (I am respected and educated like others) VOC 1/7 -Linking the positive idea with the rest of the components (image, negative idea, emotion, feeling)

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	<p>Sixth stage physical imaging</p> <p>Seventh stage: closing</p>	<p>-Initiation of arousal chains to install the positive idea until reaching VOC 7/7</p> <p>-Doing five sets of arousal chains to desensitize the sensation of paralysis at the level of the right leg and hand, pain at the level of the head and genitals</p> <p>-The 7th session was concluded with the procedures of the expired classes</p> <p>-Work on other past events by desensitizing, fixation, and physical imaging, with the conclusion of the procedures for the ended :sessions</p> <p>Other past events: Moved to reprocessing of the examinee's other traumatic experiences in session 8 Experience of sexual harassment by uncle The experience of beating and ill-treatment by the father</p>
The tenth and eleventh session	Eighth stage: re-evaluation	<p>Monitor and monitor treatment outcomes for the first phase of the EMDR treatment protocol</p> <p>- Physical non-VOC imaging ‡ 7, SUD ‡ 0 - Re-capture incomplete targets :(Good)</p> <p>*Go to the second part of the targeting scheme to re- Treatment the current triggers: Treatment of the first factor * Feeling of guilt towards parents when praying and reading the Qur'an. (Desensitization, fixation, physical imaging)</p> <p>Addressing the second trigger factor: confronting people and travelers when out on the street (desensitization, stabilization, physical imaging)</p>

		<p>*- Moving to the third section of the targeting chart to install future scenarios for each trigger factor:</p> <p>-Installing future scenarios for the first starting factor: developing the feature of tolerance and comfort, and accepting the visit of its people</p> <p>-Stabilizing future scenarios for the second starting factor: developing the advantage of patience and courage to confront people and men when going out to the street</p>
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8.3. the Post-measurement Results

A) Treatment of desensitization and reprocessing by eye movements reduce the severity of PTSD:

- a- There are statistically and clinically significant differences between the pre- and post-measurement in post-traumatic stress disorder degrees and its three dimensions in favor of the pre-measurement:

Table n° 05 the difference between the pre and post measurements, statistically and clinically, in the degrees of post-traumatic stress disorder

Individuals	Measurement	X	D	SD	T	ch Clinical indication	Level Statistical significance
10	PTSD pre-measurement	76	50.50	6.41	24.89	13.4	0.01
	post-measurement	25					

The above table shows that there is a statistically and clinically significant difference for the research sample in the degrees of post-stress disorder between

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its pre-measurement ($x = 76$) and its post-measurement ($x = 25$), and the value of ($t = 24.89$) is a function of the 0.01 level. Thus, the partial hypotheses that state that there are statistically and clinically significant differences between the tribal and remote measurements in the degrees of post-traumatic stress disorder and its three symptoms were achieved among the research subjects, and the effect size was strong ($CH = 13.4$), which indicates There is a clinical indication in the decrease in the degree of disturbance due to the effectiveness of the treatment of desensitization and retreatment by eye movements.

In this regard, the results of Rothbaum's study (1997) on 18 women with post-traumatic stress disorder as a result of sexual assaults in adulthood showed that desensitization and re-processing through eye movements were able to eliminate their symptoms of the disorder by 90% after Only 3 sessions, and at the end of the treatment, the result reached the limits of whether in the measure of post-traumatic stress disorder and depression.

One of the most important hypotheses put forward by Shapiro.F (1989) to explain the effectiveness of negative sensitivity treatment and re-processing through eye movements is that directed eye movements activate the same mikamism of dissociative sleep, which is characterized by rapid eye movements, where the researcher assumes that the relationship between eye movements And pressure is governed by the principle of mutual cessation, meaning that the movements of the eyes help to stop the pressure, but the very high level of pressure prevents the movements of the eyes.

B)There are statistically significant differences between the degrees of the belief scale and the scale of disordered units before and after the application of the therapeutic technique.

Table n° 06 The difference between the tribal and remote measurements of the degrees of sincerity of beliefs, disturbed units, and the strength of the effect of treatment

Self – scales	individual s	measureme nt	X	D	SD	T	CH	Level Statistical significanc e

Belief	10	pre-measurement	1.47	5.6	0.69	25.32	11.47	0.01
		post-measurement						
disordered units	10	pre-measurement	100	/	/	/	/	/
		post-measurement						

The table shows that there is a significant difference in the research examinees between the tribal and remote measurements of the subjective scales of treatment, which we present in the following:

There is a significant difference among the research examinees in the degrees of sincerity of positive beliefs between the pre-measurement ($x = 1.4$) and the post-measurement ($x = 7$), in favor of the post-measurement. The mean differences were ($D = 5.6$), standard deviation ($DS = 0.69$) and the value of ($T = 25.32$), which indicates a significant difference at the level (0.01). Also, the effect size was strong ($Ch = 11.47$), which indicates that the increase in the degrees of sincerity of beliefs was due to the treatment of desensitization and reprocessing through eye movements.

- As for the differences between the pre- and post-measurement of the turbulent unit degrees, they cannot be calculated using the SPSS program. Because all the degrees of the dimensional measurement became equal to zero, so we relied on the comparison between the two measurements on the arithmetic averages, where the arithmetic mean in the measurement was $X = 10$ and in the pre-measurement $X = 0$, and the difference between the two averages is clear and indicates a reduction in the intensity of negative emotions that the examinees felt While processing the memory of the rape.

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According to the adaptive treatment model, which is based on desensitization and reprocessing through eye movements, PTSD is caused by disturbed information stored in the nervous system, due to the interruption of the information processing system. Indeed, we found that the female subjects of the research, despite the passage of a long period of time since the rape incident, were still feeling afraid, seeing the face of the aggressor, and feeling his hands in their bodies, as if he was doing what he did now, because the intense negative emotions were closing in on this memory in a secluded network, and the result is when it appears Ideas about this event we find still connected with all the negative characteristics of the event. During treatment, Shapiro (2007) says, subjects spend approximately 40% of the treatment time experiencing continuous and gradual modification of all aspects of the traumatic memory (images, thoughts, emotions, and physical images).

C) Desensitization treatment and reprocessing through eye movements reduce degrees of associated disorders (anxiety and depression).

Table n° 01 is the difference between the pre and post measurement of depression and anxiety degrees and the strength of treatment effect.

Table n° 07 the difference between the pre and post measurement of depression and anxiety degrees and the strength of treatment effect.

Self – scales	Individuals	measurement	X	D	SD	T	CH	Level Statistical significance
Depression	10	pre-measurement	19.4	12	4.1	9.17	5.038	0.01
		post-measurement	7.4					
Anxiety	10	pre-measurement	27.4				7.81	0.01

		post-measurement	9.5	17.9	3.24	17.43		
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The table shows that there are significant differences among the members of the research group between the pre- and post-measurement of the degrees of concurrent disorders, where we found statistically significant differences in the degrees of depression and anxiety in favor of the post-measurement. depression measurement, The results were: pre(x=19.4) and post(x=7.4), while anxiety was in the pre(x=27.4) and post(x=9.5) measurements. We also recorded a clear clinical indication of the effect of treatment in reducing symptoms of the two disorders, which was estimated in depression (Ch = 5.03) and anxiety (Ch = 7.8)

The results of all previous studies conducted on the effectiveness of desensitization therapy and reprocessing through eye movements in the treatment of post-traumatic stress disorder among sexual assault victims have been shown (Brime.p; 2006, Ironson; 2002, Edmond; 1999, Rothbaum; 1997). Clinically significant decrease in symptoms of depression and anxiety as comorbid disorders.

In the same context, Shapiro.F (2007) considers that the beliefs held by the individual about his individual value, his effectiveness and his relationship with others are in fact verbal expressions of his feelings about his personal identity, and during the treatment of desensitization and reprocessing through eye movements, when treated Correctly targeted material, it is integrated into a positive schema with feelings of healthy personal identity extending from the past to the present and into the future.

Discuss the Results and Conclusion

We researched a group of women who were sexually assaulted, to study the effectiveness of desensitization treatment and retreatment through eye movements. This group was selected from the Yasmine Center for Women in Moral Danger in Bousmail, Tipasa, and accepted to participate in the framework of scientific research and benefit from the treatment. She showed a great desire to adhere to the appointments and to perform the homework related to the treatment. The number of ten girls ranged between 21 to 34 years, the majority of them have an average level of education, two of them have a primary education level, two secondaries, and one university. The majority of them only work for one, and they are from eight different states in Algeria.

(Effectiveness of eye movement desensitization and reprocessing treatment in relieving symptoms of post-traumatic stress disorder (PTSD) and related disorders (anxiety and depression) in a sample of women who were raped)

All the subjects of the research were exposed to a traumatic event represented in rape, where the majority of them were sexually assaulted by strangers, while the rest were cases of incest (the aggressor was the father, the stepfather, or the cousin) and this traumatic event has passed for a period ranging from one to three years, which is long enough to structure PTSD.

All the research examinations showed a high level of post-traumatic stress disorder, the symptoms of which appeared mainly in re-experiencing the traumatic event through visual and sensory intrusive images, nightmares, and a sudden feeling of being attacked again. The strategy of avoidance, which is considered the second symptom of post-traumatic stress disorder, where the subjects of the research avoided everything related to the rape incident of feelings, sensations, conversations, and postures, in addition to symptoms of substantive nervous activation of insomnia, lack of focus, and intolerance of frustration.

Post-traumatic stress disorder was also accompanied by accompanying disorders that appeared mainly in depression and anxiety disorder, where the subjects of the research were suffering from social withdrawal, isolation, loss of appetite and weight, low self-esteem, dissatisfaction, failure, disgust and dissatisfaction with oneself, difficulty In decision-making, stress, fear (of the dark, strangers and groups), insomnia, cardiovascular and somatosensory symptoms.

The clinical evaluation of the treatment of desensitization and reprocessing by eye movements revealed the four main components of the traumatic memory, which include: the image, which is the most difficult moment experienced by the research subjects during the traumatic encounter, the negative thoughts that the subjects built about the self at the moment of the traumatic encounter, and the negative nourishing emotions She has disgust, guilt, shame, anxiety, helplessness, and terror. And the accompanying physical sensations such as muscle cramps, and pain in the whole body or one of its members. In this context, Schapiro (2007) says, during treatment, subjects spend approximately 40% of the treatment time experiencing continuous and gradual modification of all aspects of the traumatic memory (images, thoughts, emotions, and bodily images).

After treatment, most of these symptoms were similar to an improvement of more than 50% in most of the research subjects. After desensitizing the components of the traumatic memory of the rape, and the rest of the other past events and establishing the positive thoughts that the subjects wished to embody at the moment of the traumatic encounter, the current situations that remained

provoked were targeted. Disturbance among the examinees, and in general, the sensitivity of these current turbulent situations was deprived of most of the subjects in an indirect way, by generalizing the effects of the treatment that took place on the original memory and the rest of the other past events, for example, most of the examinees got rid of their fear of darkness and nightfall as soon as Finishing the processing of the first section of the treatment protocol for past events. However, the researcher targeted these positions by themselves to verify the completion of the treatment. In this regard, the results of Rothbaum's study (1997) on 18 women with post-traumatic stress disorder as a result of being sexually assaulted in adulthood showed that desensitization and reprocessing through eye movements were able to eliminate symptoms of the disorder by 90% after Only 3 sessions, and by the end of treatment, the result reached the limits of both in the scale of PTSD and depression.

Finally, we focused on the ability of the female subjects to make new choices in the future, by identifying their fears and targeting positive reference models. So that our work was focused in this third section of the treatment on the best way to perceive, feel and act in these future situations, which were mainly represented by most of the examinees in the face of a parent who is one of the parties to the conflict experienced by the examinees, facing the parents or facing the aggressor as is the case in The fifth and eighth case. Where the researcher asked the examinees to imagine a section of these confrontation situations, in order to desensitize the resulting disturbance, to re-evoked these situations again, and feel them positively, all with the support of eye movements chains, or by using a special strategy for the emergency situation, which is The cognitive tissue, and all this allowed the subjects to reach the feelings of comfort and safety.

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