

Eye Movement Desensitisation and Reprocessing

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Course outcomes:

When you have completed this course you would have learnt about:

- The background to EMDR; when and how it was established by Francine Shapiro.
- The conceptual foundation of the theory of EMDR.
- You would have become familiarized with the eight staged process of EMDR in practice.
- Various research studies on EMDR, particularly those comparing EMDR to other well reputed theories such as CBT and PE.
- The various areas of controversy surrounding EMDR, particularly EMDR's mechanism of change.

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1. Introduction to Eye Movement Desensitization and Reprocessing

In the world of psychology, there is constant growth in the number of techniques used to deal with various psychological disorders. As new conditions are discovered, clinicians are constantly trying to find new and innovative ways to approach these conditions. One of these more recent psychotherapeutic techniques is that of Eye Movement Desensitization and Reprocessing (EMDR), conceived and developed by Francine Shapiro (Shapiro, 2001).

1.1 The Birth of EMDR

Shapiro writes in her EMDR handbook that in 1987 she was walking in a park, thinking about some disturbing events from her life, and found herself experiencing the negative emotions and thoughts connected to those events, the same ones that she had felt when actually experiencing the events. She realized, that when again bringing those events to mind much later that day, the events no longer stirred up the same amount of negative emotion or thoughts as they had done the first time (Shapiro, 2001).

In essence, she felt as though the events had been desensitized and no longer provoked their usual negative effect. Shapiro became intrigued by this and tried to pay attention to what was going on while she was bringing these negative events to mind that could possibly be assisting this desensitization. She realized that while she was thinking about the events, her eyes were spontaneously moving rapidly back and forth in an upward diagonal. She tried to later recreate these movements while again thinking about these disturbing memories and found that once again, the events and thoughts had “lost their charge” (Monson, Friedman, & La Bash, 2007).

Shapiro tried to recreate these bilateral movements with her patients by moving her hand back and forth while the patient tracked the movement and then asked them to think of disturbing memories, as she had done. She found that the process worked for them too, and named her therapy Eye Movement Desensitization (EMD) (Monson et al., 2007).

This was later changed to Eye Movement Desensitization and Reprocessing (EMDR) once Shapiro realized that there needed to be a conscious restructuring of the disturbing memory in order to fully desensitize the event (Monson, et al., 2007) EMDR was originally named after the eye movements, which were thought to be imperative, but Shapiro has later said that the need for these movements has caused much controversy, and if she had the choice she would rename it Reprocessing Theory (Shapiro, 2001).

1.2 The Concept Behind EMDR

The main idea behind EMDR is that when someone experiences a trauma and they are unable to properly process it, they store the memory in nonsensical pieces (Shapiro, 2001). The event is stored in the wrong form of memory, in other words, in the implicit/motoric rather than in the explicit/narrative memory (Shapiro, 2001).

The failure of the automatic processing may be caused by an ineffective encoding of the memory at the time of the traumatic event, which results in that memory lacking specific components needed for further processing (Stickgold, 2008). When something in the person's environment happens that reminds them of that event, it will often come back in flash backs and cause negative emotions and cognitions (Shapiro, 2001).

By using the bilateral stimulation together with a conscious act of reprocessing, it is believed that the negative memory can finally be brought forward and processed in its entirety (Coetzee & Regel, 2005). The process is designed to desensitize the client to the negative affective responses (which are often irrational) to the traumatic event, and to assist in attaching more positive cognitions and associations to the event by reprocessing the memory (Coetzee & Regel, 2005).

Shapiro states that "essentially, with EMDR the dysfunctional information undergoes a spontaneous change in form and meaning-incorporating insights and affect that are enhancing rather than self-denigrating to the client" (Shapiro, 2001, p. 14).

Shapiro (2001, p. 4) simplifies the uses of EMDR to:

- 1) helping the client learn from the negative experiences of the past;
- 2) desensitizing present triggers that are inappropriately distressing, and;

- 3) incorporating templates for appropriate future action that allow the client to excel individually and within her interpersonal system.

1.3 The Process of EMDR

EMDR is a technique, like most other psychotherapeutic techniques, that should only be administered by professionals who have been trained in it. The client is encouraged to delve deep into their most disturbing memories and relive them, which is a process that could obviously cause huge anxiety, and is therefore governed by protocols. The process of EMDR is an 8-phase procedure (Coetzee & Regal, 2005).

1. Assessment:

- Client history is noted and treatment plan is outlined.
- Memories and cognitions that the client would like to change are identified.
- Details of traumatic event are not important, the emotions and physical sensations are what matter in EMDR.

2. Preparation:

- Client is prepped for the EMDR process.
- Emphasis placed on creating safety and a solid rapport.
- Client taught self-care techniques for dealing with strong emotions that may occur.
- Form of bilateral stimulation is decided upon. Either hand movements, auditory cues, or sensory bilateral stimulation such as alternating tapping on clients knees.

3. Assessment of target memory/image:

- Client is asked to think of a scene or picture that represents the chosen traumatic event, a negative self-belief associated to the event, and a positive self-belief they would like to associate with the event.
- Client asked to rate validity of positive cognition on Validity of Cognition (VOC) scale of 1-7. , 1 being completely false and 7 being completely true.
- Client asked to describe the disturbing emotions felt when focusing on the disturbing image. They are then asked to rate the level of disturbance felt on

the 11point Subjective Units of Distress (SUD) Scale, 0 meaning not distressing at all, and 10 meaning most distressing emotion ever felt.

- The client is also asked to report any discomfort felt in the body.

4. Desensitization:

- Client holds the target negative image in mind together with the negative cognitions attached to it.
- The bilateral stimulation begins and continues until the memory has been processed along all lines of association.
- Therapist monitors progress and looks for emergence of new issues.
- Bilateral stimulation will continue until the client reports a score between 0 and 2 on the SUD scale.

5. Installation:

- Positive cognitions are now “installed” to attach to the memory.
- Client asked to focus on the positive self-belief they would like to attach to the memory and the bilateral stimulation begins again.
- This is continued until the client reports a score of 7 on the VOC scale.

6. Body Scan:

- Client is asked to do a scan of their body and report any negative sensations.
- If negative sensations are reported then the bilateral stimulation is repeated.
- If positive sensations are reported, then bilateral stimulation is repeated to reinforce the sensations.
- Phase 6 is complete when the client is able to talk about the traumatic event and no longer feel the negative bodily sensations that were earlier felt.

7. Closure:

- The therapist offers praise for the effort made by the client, as well as offering support.
- The therapist will also “prescribe” containment exercises, especially if the session is incomplete and there is still unprocessed material.
- The containment exercises include relaxation and anxiety management techniques including breathing and deep muscle relaxation.

8. Debriefing the Experience:

- The client is debriefed and the possible effects of the session are explained.
- The client is warned that they may feel the effects of continued processing for the next few days.

2. Research Studies on EMDR

EMDR has generated an enormous amount of interest as well as debate since the early stages of its development. It is one of the most extensively researched treatments for PTSD, and has also been applied as a treatment for anxiety, depression, unresolved grief, addictions and dissociative disorders (Spates et al., cited in Foa et al., 2009).

The many studies examining the efficacy of EMDR have served to create a firm, empirically based case for the use of EMDR as an effective and lasting treatment of PTSD. Indeed, EMDR is now recognized worldwide as an effective trauma treatment by organizations such as the American Psychiatric Association and the US Department of Defense. According to the International Society for Traumatic Stress (ISTSS) guidelines for treatment of PTSD, EMDR has been recognized as one of the most reviewed interventions of therapeutic approaches in treating PTSD (Friedman, Keane & Resick, 2007).

2.1 EMDR and Cognitive Behavioural Therapy

A number of meta-analyses have been conducted in order to examine the effectiveness of EMDR in comparison with other psychotherapeutic treatments (Spates, et al., as cited in Foa et al, 2009).

A controlled study conducted by Wanders et al (2008) compared EMDR and CBT as treatment for children with self-esteem and behavioural problems. Twenty-six such children, between the ages of 10 and 11, were randomly assigned to receive either four sessions of EMDR, or four sessions of CBT, in order to contrast the credibility of each treatment. CBT is a psychotherapeutic technique that focuses on, and addresses, the thought processes which lead to problem feelings and actions (CDCBT, 2003).

Each treatment was evaluated by having parents, mentors and children complete a wide variety of self-report evaluations. While EMDR and CBT produced similar results in terms of

parent and mentor self-reports of self-esteem, the children treated with CBT did not report any improvements in self-esteem. Alternatively, children in the EMDR group reported significant increases in self-esteem.

By the end of treatment, it was only the CBT children for whom significant behavioural changes were reported, with only a trend toward behavioural changes being seen in the EMDR group. It is important to note, however, that at the 6 month follow up, changes in target behaviour were significantly greater for the EMDR group [$t(13) = 5.15, p < .001$] compared to the CBT group ($t(11) = 4.77, p < .001$).

2.2 EMDR and Prolonged Exposure

An additional investigation into the treatment of traumatic stress was carried out by Ironson, Freund, Strauss & Williams (2002). This community-based trial study compared the efficacy of two treatments for PTSD: Prolonged Exposure (PE) and EMDR. PE is a therapeutic technique that focuses on repeatedly exposing the client to the triggers of the traumatic event, with the intention of reducing the negative emotional, cognitive and physiological responses associated with the traumatic memory.

The study analyzed 22 trauma patients from a university-based clinic who met the criteria for PTSD. The patients were victims of rape, theft or witnesses to murder; and may have suffered harm, including physical, mental and emotional injury or economic loss. The results showed that both approaches produced a significant reduction in PTSD and depression symptoms, which were maintained at a three month follow-up.

Individuals in the EMDR treatment group, however, achieved a reduction in symptoms both faster, and to a greater extent, than individuals treated with PE. After just 3 sessions, 7 out of 10 individuals treated with EMDR no longer met the criteria for PTSD, compared to only 2 of 12 individuals in the PE treatment group over the same period of time. All patients who remained in treatment with PE for the full treatment regimen, however, decreased in PTSD scores.

It was also found that Subjective Units of Distress (SUDS) ratings decreased significantly during the initial session of EMDR, but changed little during the first session of PE. Post session SUDS were significantly lower for EMDR than for PE (Shapiro, 2001).

The findings of this study indicate the effectiveness of EMDR as a treatment for individuals suffering from PTSD, and draw attention to the short time period that is necessary for EMDR to be effective in reducing PTSD symptoms.

2.3 EMDR & Routine Individual Treatment

Edmond, Rubin & Wambach (1999) administered a study with adult female survivors of childhood sexual abuse that verified the effectiveness of EMDR. Fifty nine women were randomly assigned to one of three groups. The first group consisted of six sessions of individual EMDR treatment; the second group consisted of six sessions of routine psychotherapeutic individual treatment; and the third group was the delayed treatment control group.

Results showed that individuals in both the first and second groups – EMDR and routine individual treatment respectively – displayed reduced symptoms of anxiety, depression and post-traumatic stress.

At a three-month follow-up, participants who had been treated with EMDR scored significantly better than routine individual treatment participants on two of the four measures, with large effect sizes suggestive of clinical significance (Edmond et al., as cited in Shapiro, 2001).

2.4 Long-term Follow Up Results on PTSD

Extensive research has investigated the long-term effectiveness of EMDR in treating PTSD. Research thus far has indicated that EMDR is indeed an effective, long-term solution to PTSD (Foa et al., 2009).

After the 1999 Marmara earthquake in Turkey, roughly 1500 people were at risk of developing acute PTSD, as a result of shock, grief due to loss of possessions and loved ones. In a study conducted by Konuk *et al* (2006), 41 individuals with diagnosed PTSD were given five 90 minute sessions of EMDR. Of those treated, 92.7% experienced a reduction in PTSD symptoms. These results were maintained successfully at the 6 month follow up.

A study on the effectiveness of EDMR, administered by Wilson, Becker & Tinker (1995), presented findings on a 15-month follow-up of the effects of EMDR on 66 participants. 32 of the participants had been diagnosed with PTSD, and the other 34 with depression and anxiety. The follow up session was comprised of a series of interviews and the outcome measures were administered by an independent clinical psychologist who was not part of the actual study. The results indicated an 84% reduction in PTSD diagnosis and a 68% reduction in depression and anxiety symptoms.

Van der Kolk *et al* (2007) conducted a three year long study comparing the effects of EMDR, fluoxetine and a placebo, in treating PTSD. The 88 participants were randomly assigned to each of the three groups, and received 8 weeks of treatment. After the initial 8 weeks of treatment, participants went for follow up sessions every 6 months, for the duration of July 2000 to July 2003.

The results indicated that EMDR was more successful than pharmacotherapy in achieving sustained reductions in PTSD and depression symptoms. It was, however, adult-onset trauma survivors who benefitted most substantially from the treatment. Of the adult-onset trauma survivors, 75% of those receiving EMDR experienced a reduction in PTSD symptoms, as compared to those treated with fluoxetine and the pill placebo group, who experienced no improvement in PTSD symptoms. In terms of child-onset trauma subjects, none of the treatments produced a significant improvement in PTSD symptoms.

As the above studies reveal, there has been extensive investigation into the effectiveness of EMDR as a trauma treatment. Many of these studies have compared EMDR to other well known, well researched therapies, such as CBT and PE. In each of the cited studies, EMDR has not only shown itself to be highly effective in the treatment of trauma and a reduction in SUDs, but also that its positive effects are long term and are felt much sooner compared to techniques such as PE and CBT.

3. Issues of debate surrounding EMDR

This paper has drawn attention to the many studies that have been done on EMDR, and to the wealth of empirical findings that show support for its efficacy. In order to add greater depth to one's understanding of EMDR, it is both necessary and helpful to consider some

areas of debate that surround the theory. It is important to note that the controversy is not about whether EMDR works or not, but about *why* it is so effective.

In exploring the debates surrounding EMDR, this section of the paper will focus on an analysis of various suggested theories as to why EMDR is so effective. The issue of how the absence of a substantial, explanatory theory fuels controversy over the practical use of EMDR will also be looked at. Finally, as part of the exploration of the controversy surrounding EMDR, various attitudes that clinicians have towards the approach will be examined.

3.1 Controversy surrounding *why* EMDR is so successful

Part of the reason for the controversy surrounding EMDR, is that research into why the process is so effective, has not been conclusive (Dworkin, M. 2003). There are a number of theories which suggest possible reasons for the efficacy of EMDR. However, while there is a wealth of evidence-based support for the fact that EMDR works, the same cannot be said for the reason why it works. As such, at this time, the theories put forward remain just that – theories. A number of these theories will now be considered.

Information processing – unblocking a system that is stuck

Shapiro (2001) writes that EMDR's effectiveness lies in the fact that it helps to unblock, or, stimulate, information processing systems (which are innate to all people) that have become blocked as a result of trauma, leading to the manifestation of PTSD symptoms.

The argument is that the stimulation of the system – and thus, more adaptive forms of information processing – can be achieved through a number of physiological factors. The first of these factors the deconditioning brought about through taught relaxation. The second, is alternating dual attention cues such as the eye-movements or auditory and tactile cues. The third, a shift in the state of the brain that, in a similar way to REM sleep, helps to strengthen weak associations. An example of the latter would be helping an individual to process information about the trauma in a more adaptive, self-enhancing way – strengthening thoughts such as, 'the danger has passed', or, 'I am no longer a child and can stand up to my fear'. Shapiro argues that these various physiological factors may stimulate the information processing system, thus allowing individuals to process information in ways that are more adaptive.

Orientating response

One group of theorists believe that the role of the eye movements in EMDR's effectiveness is that they cause an interruption in the client's habitual physiological response to the traumatic memory, by presenting the client with another set of physiological responses (such as interest and focus on the bilateral movements or sounds). This interruption allows information to be reprocessed. Different theorists have slightly different opinions about how this orientation response works.

Theorists such as Lipke (1992a, 2000, as cited in Shapiro, 2001), suggest that putting in place new physiological responses (a result of the eye movements), disrupts the client's usual associations and negative affect linked to the trauma (such as anxiety and arousal), allowing new learning to take place. In other words, allowing the client to process the traumatic memory differently, in a more adaptive way. These speculations of the orientation response are based on cognitive/information processing.

Stickgold's (2008) speculations about how the orientation response works has a more neurological basis. He maintains that it is the shift in brain state induced by EMDR, and reflective of rapid eye movement (REM) sleep, which allows trauma to be processed. REM sleep has been shown to be a period of deep sleep when the mind is actually processing the day's events and storing the memories in suitable forms. It is believed that the rapid bilateral eye movements that take place during this phase of sleep are partly responsible for this processing (Stickgold, 2002). In addition, Stickgold (2008) maintains that it is possible that the reprocessing in both REM sleep and EMDR are aided by the shifts of attention caused by the bilateral stimulation and changes in the environment.

A behavioural perspective is put forward by Armstrong and Vaughan (1994, as cited in Shapiro, 2001). These theorists suggest that the client's behaviour, or learned response to the traumatic memory changes as a result of the orientation response, due to the fact that escape/avoidance behaviour has been interrupted.

The strength of each of these perspectives is that they are in line with accepted psychological thought. Each of the above perspectives helps the client balance their thoughts of the past, with their present reality.

Distraction

The suggestion here, is that the bilateral movements are a form of distraction, which prevents the client from focusing fully on the traumatic memory. As such, the client becomes deconditioned to the negative affect and physiological responses previously associated with the traumatic memory.

It has been argued, however, that this understanding of the effectiveness of the eye movements may not be as helpful as the orientation response perspective outlined above. The reason for this is that studies have found that distraction mechanisms weaken the long-term effectiveness of a therapeutic intervention, rather than increasing it (Grayson et al., 1982, 1986; Satorry, et al., 1982, as cited in Shapiro, 2001).

That said, progressive counting (a therapeutic technique based on the counting method) has been found to be as effective as EMDR (Greenwald & Schmitt, 2010). In this method, the traumatic memory is repeatedly revisited.

At first, the memory is only revisited for the duration of a count to 10 (which the therapist does while the client visualizes the memory), the second time, the memory visualization lasts 20 counts, and 30 the next count, until 100 counts is reached. The client becomes accustomed to the memory (similarly to the PE technique, though in a shorter time-frame). The client can choose to discuss the revisited memory, or not. Case reports have revealed PC to be effective in resolving the trauma surrounding the memory, though a great deal of further research and testing is required.

Hypnosis

It does not seem likely that EMDR's efficacy lies in it being a form of hypnosis. Electroencephalography (EEG) readings - a neurological diagnostic procedure - that are taken during the EMDR process and during the process of hypnosis show that the brain wave activity is different during these two techniques.

During EMDR, the brain wave patterns shown by the EEG readings are the same as those seen when one is awake. Alternatively, during hypnosis, it is predominantly theta (associated

with light meditation and sleep), alpha (associated with deep relaxation) and beta (associated with waking consciousness) waves that the EEG picks up (Shapiro, 2001; Finerminds, 2012). In other words, EEG readings show that client's are not in a state of hypnosis. A further point to note is that hypnosis does not have a high success rate for treating PTSD, whereas the success rate of EMDR is at 85% (Shapiro, 2001).

EMDR – a repackaging of other forms of therapy

Some clinicians argue that EMDR's effectiveness lies in the fact that it is actually exposure therapy repackaged (Cook, et al., 2009), while others argue that it is a form of CBT (Monson et. al, 2007). Both of these opinions stem from studies that have compared the process of EMDR with eye-movements, to the process without movements – in other words, the 8 step process is followed, but the bilateral movements are left out. No major differences in treatment outcome were found, leading them to conclude that efficacy must be due to something other than the eye-movement, such as the principles of CBT (Monson et. al, 2007). However, in a study conducted by Wanders et. al (2008), EMDR was shown to be more effective than CBT in reducing target behavior, and increasing the self-esteem, of children with behavioural and self-esteem problems.

The unique features of EMDR

Additional thoughts on what makes EMDR so successful is the fact that it is client-directed; giving the client the power to not only set the pace of therapy, but also to choose for themselves which information they will focus on, as well as how they would like to process the information (Monson et. al 2007).

3.2 Lack of Theory

The section above has highlighted a number of suggested theories as to EMDR's mechanism of change. The fact that there are no conclusive findings on what makes EMDR effective, has lead to further controversy among clinicians. Some clinicians feel that it is irresponsible to use a technique when the mechanism of change is not understood. For other clinicians, the ample empirical evidence of EMDR's success is basis enough for using

the technique. As these perspectives feed into the debate surrounding EMDR, each will be considered briefly.

The need to understand the mechanism of change

A comparative case study conducted by Cook, et al. (2009), examined two Departments of Veteran Affairs treatment centres in order to explore the extensive use of EMDR at the one site, and the resistance to it at the other. One of their findings was that clinicians at the 'resistant to EMDR' site were highly skeptical of a form of therapy not supported by a thorough, explanatory theory. Their feeling was that as they did not understand the mechanism of change, they would be unwilling to use EMDR with their clients.

Empirical support is enough

For clinicians at the comparison site, however, the lack of a substantive theory was not a deterrent to the use of a form of therapy so strongly supported by empirical evidence (Cook et al., 2009). They are quoted in Cook et al.'s (2009) study as saying, "If it works... how it works is a secondary question", and, "I have no idea... I don't have to understand why. I'm more interested in looking at the, you know, hypothesis testing, does it work or not... if controlled studies show that it makes a difference and there's an effect size that convinces me."

Stickgold (2008) points out that while it is vital to be developing a scientific understanding of what makes EMDR effective, it is common for successful treatments to be found and used, prior to a scientific understanding of exactly what causes the result. Stickgold (2008) cites the example of Flemming's discovery of the treatment properties of penicillin

3.3 Attitudes of Clinicians

The perspectives highlighted above lead to a discussion of a further reality that feeds into the controversy surrounding EMDR. Namely, the attitudes of clinicians towards it. Cook et al.'s (2009, p.521) case study highlighted the perception of clinicians at the 'resistant' site,

when first presented with EMDR, that it is “gimmicky” and that “it sounded like a far-fetched almost crazy idea that something so simple could treat PTSD”.

Alternatively, clinicians at the comparison site participated in EMDR role plays, and, in doing so, both observed and experienced “substantial relief in distress” and explained that the process had been “very powerful” (Cook et al., 2009, p.521).

The argument here is that clinicians at the ‘resistant’ site were unfamiliar with up to date studies on EMDR, and had formed their opinion on the therapy early on. Additionally, their dislike of Shapiro’s early, and arguably exaggerated, report of the massive success of EMDR fed into their disdain and skepticism of the theory.

Clinicians at the comparison site, however, had a highly respected colleague who had introduced them to EMDR, they had participated in role-plays and found EMDR to be very helpful, they followed up to date literature on the topic and, additionally, they found it to be in sync with the way they liked to practice, and a far pleasanter form of therapy than exposure therapy, which one clinician felt was similar to hitting clients over the head.

3.4 Closing thoughts

This section has served to outline some of the key debates surrounding EMDR. Firstly, controversy over the role of eye-movements, and possible theories as to why EMDR is so effective, have been considered. The lack of a conclusive theory has generated a second category of controversy; whether it is professionally responsible to use a technique that – despite its effectiveness – has no proven explanation of the mechanism of change. In doing this, the influence of clinicians’ attitudes and their first impressions of EMDR, have also been considered.

4. Conclusion

This paper has sought to explore EMDR as a therapeutic technique. In so doing, the background and process of EMDR have been outlined. Building on this, empirical evidence supporting the effectiveness of EMDR as a trauma treatment has been provided. Attention has been paid to studies that have compared the use of EMDR to other treatment

techniques, such as CBT and PE. Finally, in order to add depth to the analysis, the paper dealt with areas of controversy surrounding EMDR. Various proposed theories of EMDR's mechanism of change were described, and it was pointed out that a definite answer as to why EMDR is so effective has not yet been reached. Finally, attitudes towards EMDR were examined, as these play an important part in the use, and acceptance, of EMDR in clinical practice.

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