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Eye Movement Desensitization and Reprocessing: Innovative Clinical Applications

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Neurologically-based therapies such as Eye Movement Desensitization and Reprocessing (EMDR) are being clinically implemented and researched in the field of psychotherapy. While EMDR has a theoretical base and some research support for its effectiveness with Posttraumatic Stress Disorder (PTSD) therapists are now developing and using EMDR for other clinical problems. This report illustrates some of the unique applications of EMDR with clinical problems such as: driving phobia, interpersonal arguments, dyspareunia, depression, anxiety, and eating problems.

KEY WORDS: EMDR; innovations.

In recent years there has been an increase in the employment of Eye Movement Desensitization and Reprocessing (EMDR) discovered by Francine Shapiro in 1987. Shapiro theorizes that traumatic memories may be locked in the right hemisphere due to inhibition of normal informational processing. She believes that bilateral eye movements activate the right and left hemispheres of the brain and produce information processing. Indeed, preliminary brain imaging studies show that this type of bilateral stimulation transfers information from one hemisphere to the other (van der Kolk, 1998). Thus, from a neurological perspective, the eye movements stimulate the movement of information through the corpus callosum from the right hemisphere of the brain to the left hemisphere. Also, preliminary research evidence from brain studies indicates that such traumatic memories and their emotions are stored in the right hemisphere as disturbing sensory images and physical sensations and that these memories need to be processed through both brain hemispheres for appropriate functioning to occur (Perry, 1998). Some of the success of EMDR over other types of exposure therapies may be due to its

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activation of an intense orienting response. There is some research evidence that the bilateral eye movements trigger an ability to attend to painful affect without emotional flooding (Armstrong & Vaughn, 1996). The ability of clients to access, regulate, and contain intense emotional states is important in order to experience a corrective emotional experience with EMDR.

Shapiro (1995) has developed a model and treatment protocol that emphasizes accessing, desensitizing, and reprocessing traumatic memories that have previously been frozen in time in the brain. Shapiro's model was originally used primarily to treat PTSD. There is a growing body of research that supports EMDR as an effective treatment for the residual psychological effects of trauma, and in head to head comparisons of scientifically valid research studies positive results were found for EMDR along with exposure procedures and relaxation procedures (Vaughn et al., 1994). However, in many of these studies, EMDR required far less time for successful treatment. For a more detailed discussion of EMDR research results, the reader is referred to the work of Lipke (2000).

It is not our purpose to present the standard EMDR model and the research concerning its use with PTSD (see Shapiro, 1995) but to discuss innovative clinical applications of EMDR that we have found to be effective. More therapists are implementing EMDR with diverse populations and clinical problems, and the original model is now being expanded, deepened, and strengthened (Manfield, 1998; Phillips, 2000). For the past three years, we have met weekly to expand our clinical applications of EMDR. Through collaborative discussions and informed experimentation, we have discovered unique uses of EMDR with our clients and with a variety of client problems.

IN VIVO EMDR

Driving Phobia

The behavioral techniques of flooding and desensitization have a history of successful application and research support, both *in vivo* and through imagery. To our knowledge, there are no reports in the literature that describe the process of using EMDR *in vivo* as a substitute for flooding or desensitization. We have discovered that *in vivo* EMDR can be effective with problems that have not been responsive to behavioral interventions. The following is an illustration of such a case.

A sixty-year-old woman sought EMDR due to an automobile accident four months prior in which she was "rear ended" while stopped and preparing to turn left into her driveway. Since the accident, she had been unable to drive or even ride in a vehicle and suffered from nightmares and flashbacks. A 5-session trial of systematic desensitization had been employed for her post-traumatic stress but had not been effective. EMDR was then used, and the client was able to re-create the image of her accident with accompanying feelings of anxiety and fear. Multiple eye

movement sets were used during a 90 minute session, and she achieved a significant degree of desensitization. During the two weeks between sessions, she reported that her nightmares and flashbacks were less frequent, and she was able to ride as a passenger with her husband with minimal anxiety. Eye movement sets were employed during the second 90 minute session with further desensitization. Following that session, she was able to drive by herself and reported an absence of nightmares and flashbacks. Only one problem remained—she was unable to make a left turn.

After two additional EMDR sessions, she continued to be free of nightmares and flashbacks and drove by herself without anxiety. However, she was still unable to turn left. Her most troubling scene from the accident had been looking into her rear-view mirror prior to being hit. The therapist decided to conduct the next session in the office parking lot. He moved his car behind hers until the bumpers touched in order to simulate the conditions of the accident. He then sat beside the client in her vehicle. As the client sat behind the wheel and looked into her rear-view mirror, the therapist implemented sets of eye movements. After approximately 30 minutes, her anxiety peaked, then greatly decreased, and the session was terminated.

During the following days, her ability to make left turns returned. However, she was unable to make the left turn into her driveway where the accident had occurred. The next and last session took place on the street at the exact point of her accident. With her car stopped, her left turn blinker on, and her therapist in the passengers seat, eye movement sets were used until she was free of anxiety. She then made that left turn along with several more before driving the therapist back to his office. Monthly follow-up phone calls for a six-month period indicated no return of her PTSD symptoms.

In Session Arguments

As couple and family therapists, we often experience rather heated and highly emotional arguments among family members during sessions. These *in vivo* arguments with their powerful emotions can be excellent targets for EMDR. In such situations, the therapist stops the intense interaction and asks the participants to focus on their bodily sensations, images, emotions, and thoughts that are accompanying the stressful interactions. One at a time, each client in the session maintains this focus while bilateral eye movements are implemented. As the intense negative images, emotions, and cognitions of each client are desensitized and reprocessed with EMDR, the dysfunctional emotional interaction often changes. Sometimes, as the present emotion is targeted, earlier traumatic experiences and their painful emotions that underlie the dysfunctional interactions emerge. Through reprocessing with EMDR, the participants' emotional reactivity to each other is no longer associated to painful past events with change often resulting.

We have also discovered that as a participant self-discloses a deep, painful, past event the listening participants often respond with compassion and empathy.

Those who experience the hurt and vulnerability of their family members instead of the usual anger or rage tend to soften and feel more connected (Johnson & Greenberg 1988). A complete discussion of the process and technique of using EMDR to change dysfunctional interactional patterns and increase intimacy can be found in a recent issue of *The Journal of Marital and Family Therapy* (Protinsky, Sparks, & Flemke, 2001).

SOMATIC FOCUS

Implementing clinical interventions that use the body as a focus in the treatment of trauma has been underdeveloped and little researched despite evidence of the importance of somatic memory (van der Kolk, 1994). Researchers have focused on the relationship of somatic symptoms to posttraumatic stress, and psychosomatic symptoms have been reported with high frequency (Phillips, 1995). Accessing and using the client's awareness of the body can be a very useful treatment tool. Often, many trauma survivors are plagued by physical sensations with no memory of the actual event as their memories are not encoded as words but as somatic sensations. As van der Kolk (1994) phrased it, "The body keeps the score." Thus, explicit information may be missing, but many somatic sensations contain the implicit memories of the trauma. Flashbacks may also be experienced as somatic sensations, and many flashbacks are often mis-diagnosed as psychosomatic conditions (Herman, 1992). Lindy, Green, and Grace (1992) labeled this process as a somatic re-enactment of trauma events. They believe that some unexplained physical symptoms that frustrate patients and doctors may actually be somatic re-enactments of past trauma.

One particular case example illustrates how memories are not always encoded as words but as somatic sensations. A woman came into therapy as a result of having disdain for intercourse with her husband of seven years. She described having a burning sensation upon penetration and after intercourse had ended. She had sought various gynecological exams, with no medical conditions discovered. It appeared that clinically she was experiencing dyspareunia, requiring interventions to help alleviate some of the anxiety surrounding sexual experiences. She discussed wanting to somehow understand any possible meanings related to her repulsion towards intercourse, which was creating significant problems between her self and husband.

As a part of history taking, the therapist asked the client if she had ever experienced sexual trauma, and she denied any recollection of such incidents. After listening to her family history, however, it seemed possible to the therapist that she had in her past some type of sexual abuse and that she might be one of the many trauma survivors who are plagued by physical sensations with no memory of the actual experience(s). Her body appeared to have retained some

type of memory. The therapist, however, was careful not to suggest any past abuse and presented EMDR as an intervention that might be effective in desensitizing her sexual anxiety.

Upon having her focus on both the memory of the most recent burning experience with her husband along with its somatic location, she began the EMDR sets. Initially, no therapeutic response resulted from those sets. It was only after she began to feel less anxious with the approach that she felt safe enough to release the memories of past severe experiences of sexual abuse. She became consciously aware of having been sexually abused by multiple perpetrators with the burning sensation linked to objects inserted within her vagina. Further EMDR sets were used over the course of multiple sessions to decrease her emotional reactivity to the memories. Once these memories came to the woman's conscious level and were desensitized and reprocessed, she ceased experiencing any physical discomfort while having intercourse.

Thus, the body holds many clues concerning traumatic experiences. Identifying trauma triggers often is a clinical challenge, and body awareness can be an effective assistant. Using somatic sensations as initial EMDR targets can allow for a fast trip to the past where the client can connect with narratives and cognitions of forgotten traumatic memories. In addition to cognitive memories, emotions associated with past trauma can also be identified through body sensations (Rothschild, 2000). Damasio (1994) uses the term, "Somatic Marker," to describe the process by which somatic sensations are linked with emotions. Using EMDR with a somatic sensation as the initial target is an important approach, especially with clients who are primarily cognitive and have difficulty identifying or accessing emotions. Also, for those who experienced trauma in their very early years, the event may have been stored in the amygdala as raw emotion without the aid of the underdeveloped hippocampus that would have given the traumatic event time, space, and contextual understandings (Nadel & Jacobs, 1996).

Research indicates that state dependent recall of traumatic events is also related to postural states. Thus, recall of trauma events can sometimes be triggered by engaging in a posture that was inherent in the original trauma situation (Rothschild, 2000). The amplification of body postures as a treatment technique has been used in a variety of ways (Gendlin, 1982; Perls, 1969). We have found that asking our clients to first identify and then to amplify physical sensations or postural stances while experiencing sets of eye movements often accesses trauma more immediately than conventional protocol.

Many therapists who work with clients suffering from the effects of trauma may not know how to incorporate methods of somatic focusing in order to increase their treatment effectiveness (Phillips, 1995). This may be especially true if the primary sensory modality of the client is kinesthetic and the therapist is accustomed to using imagery and language. The following is a case example that illustrates using postural amplification with EMDR to break through a cognitive barrier.

One young woman experienced shaking in both her body and voice along with intense anxiety whenever she felt she needed to "perform." Creating and holding onto the negative cognition, "people will know I'm not perfect," while recalling a specific incident led her to a string of cognitive experiences and visually based memories of traumatic past events with little emotional content. Despite accessing these past experiences that seemed related to her current symptoms, she reported feeling little relief over a week's time after her EMDR session.

Rather than continuing to search for additional negative cognition, the client instead was asked to recall a time when she experienced intense shaking. She was then asked to physically experience, enact, and then amplify the shaking behavior and the sensations that accompanied it. Her movements became exaggerated as she tracked the therapist's bi-lateral hand movements with her eyes. Within a few sets, the client was able to release her cognitive focus and access a combination of fear and anger that accompanied the shaking. Accessing these emotions was clinically important as she had remained at the cognitive level in previous sessions. Several more sets of eye movements brought an associated traumatic memory including not only a narrative but also somatic sensations and emotions. The remainder of the session was used to desensitize and reprocess this past primary trauma and the emotions that were underneath her present symptom of shaking in the face of performance.

This client's memory, its somatic expressions, and accompanying emotions were used as a starting point for several sessions until she reported experiencing minimal to no shaking in the face of "performing." At a six-month follow-up she reported continued mitigation of symptoms. It is clinically important to note that progress was not made until the target of her EMDR sessions became her somatic and emotional expressions of her past traumatic experiences.

EMDR AND METAPHOR

There are some reports in the EMDR literature concerning metaphorical images emerging during eye movement sets (Mansfield, 1998). In our experience it is not uncommon for entire EMDR sessions or even multiple sessions to be entirely or partially metaphorical. During such sessions, clients typically report metaphorical narratives emerging during and between eye movement sets. The meanings associated with the presenting symbols and metaphors may be tempting to explore, but we have found that it is important to continue the eye movement process in order for reprocessing to occur. Analysis may actually be a distraction or a roadblock to reprocessing. It is our experience that when an EMDR session or even an entire treatment is exclusively metaphorical or symbolic, positive therapeutic outcomes can be achieved without interpreting the symbolism.

The following case demonstrates an example of one client who, through all her EMDR sessions, presented only metaphorical material. She presented for

treatment of her depression brought on by the ending of the most significant love relationship in her life. The first three sessions were devoted to taking history, assessing functioning, explaining the EMDR process, and building rapport. EMDR began during the fourth session, and the initial target was a combination of her hopeless thinking, sad affect, an image of her lover leaving, and the empty feeling in her stomach. In this initial EMDR session, her primary experience was being in a dark closet, feeling fearful, but not being ready to open the door. With further eye movement sets, she experienced a white light within the darkness of the closet. A peaceful feeling resulted, and the session came to a close. Between sessions, she reported a significant decrease in her depressive affect.

The initial target for her next EMDR session was the closet with the white light. She quickly visualized a tall monument surrounded by a fence. As eye movement sets continued, she saw a large hole in the ground that became partially filled by the end of the session. In the following session, the partially filled hole was the initial target, and it became completely filled after several more sets. As the eye movement process continued, a large orb radiating a strong white light emerged. Again, she reported a sense of peacefulness and feeling centered as the session ended. Once again, between sessions, she reported a significant decrease in her depression and an increase in her social behavior. Her last EMDR session led to experiencing herself sitting in an empty football stadium. She watched from the stands as various emotionally traumatic events from her past were played out on the field. She reported watching these with a sense of detachment and understanding.

During the five weeks in which these four EMDR sessions took place, this client experienced an incremental decrease in her depression each week, a reported increase in insight and acceptance concerning the ending of her relationship, and an engagement in more interpersonal activities. Several follow-up, non-EMDR, sessions occurred over the next three months. Due to continued improved functioning, treatment was terminated.

During this client's metaphorical experiences, she did not feel excessively anxious nor did she believe that these images were indicative of her being abnormal. Neither she nor her therapist analyzed her metaphors, but both treated her EMDR metaphorical experiences as therapeutic narratives created by a healing part of herself. She described her sessions as resembling a healing journey accompanied by an accepting and validating guide. She was more than pleased to improve even though she did not experience a conscious, concrete understanding as to why experiencing these metaphoric sessions led to such changes.

EMDR, EATING DISTURBANCE, AND AT-HOME SELF TREATMENT

Helping clients learn to curb troublesome urges continues to perplex the best of therapists. Our experience in using EMDR with these urges has been confined to involuntary over-eating. The following case will highlight an intervention process

that was used in the office with the therapist as well as at home by the client in order to curb her excessive urges to over-eat.

A long-term client (18 months) had made significant progress with her depression and family of origin stresses during therapy that often included EMDR sessions. However, she was unable to change her yo-yo pattern of dieting. Despite being able to identify the interpersonal and emotional stressors that precipitated her periodic excessive eating, she felt controlled by her urge to use food for soothing. Various cognitive and behavioral methods of self-soothing in addition to in-session EMDR that targeted her troublesome eating were unsuccessful. Feeling frustrated, she suggested to the therapist that she use eye movement sets at home whenever she felt the urge to eat excessively. The therapist agreed as long as the client promised to call him (no matter what the time) if she had any overwhelming experiences related to her at home use of EMDR. She also agreed to report by phone, between sessions, concerning her experiences. The client was trained in methods of self-initiated eye movements in which she quickly moved her eyes back and forth from a picture on the left wall in her room to one on the right.

During the next month of self-treatment at home, she used eye movement sets an average of five times per week for her urge to over-eat. During those self-initiated sets, the decrease in the intensity of her over-eating urges allowed her to improve her self-control. She also remembered several traumatic events from her childhood that, for her, had direct relationships to her excessive eating. Her first experience of accessing a childhood trauma created significant anxiety, and she called the therapist as promised. The therapist guided her through additional eye movement sets over the phone until her anxiety level was desensitized and reprocessed. Throughout that month, she continued to use eye movements at home whenever she experienced her desire to eat excessively. Her eating intensity continued to decrease, and she processed additional trauma memories without experiencing a level of discomfort that required her to call the therapist.

During the second month of at home EMDR, she continued to use eye movements for her over-eating urges which then became almost extinct. She also experienced further desensitization and reprocessing of emotionally traumatic childhood events. One year later she reported rarely having a desire to eat excessively. On those occasions when she did, sets of eye movements successfully reduced the intensity and inhibited her behavior.

MODIFICATIONS IN EMDR PROTOCOL

Alternatives in Length, Speed, and Direction

We have found that clients respond differently to different set lengths, the speed of each pass, as well as changes in direction. For instance, standard protocol requires 24 passes for each set of eye movements (Shapiro, 1995). While

some clients respond well to this standard, we have found others who show little movement with that experience. This finding is consistent with Shapiro who has discussed the importance of such variability. Clients appear to have their own unique rhythm and for the therapist to be open to discovering that rhythm seems to be part of the art form in using EMDR. For example, too many passes can often overwhelm clients with material and interfere with their emotional processing; too few passes and the therapist's pause may interrupt a client's natural flow of material.

We have discovered that beginning with the standard protocol is useful. As clients become comfortable with the process, we ask that they determine their own set length by closing their eyes, nodding, or looking away to signal the completion of the set. It has also been our experience that despite a natural and continuous flow of cognitive material being processed, there are still those who have trouble accessing the emotion that comes with deep wounding. We have found this particularly true for highly guarded clients, especially those who defend through intellectual abilities. However changing eye movements can often bring about a change in affect. This change may be accomplished by changing the length of the pass, changing the speed of the pass, or changing from a lateral pass to a diagonal one.

Primary Sensory Modality

Individuals have their own unique way of experiencing the world (McNamee & Gergen, 1992). We may preference sight, sound or touch; we may describe our environment by the way we think or feel. Although standard EMDR protocol incorporates many of the senses, the initial steps are often devoted to targeting images and/or negative cognitions that eventually will be superseded by positive cognitions (Shapiro, 1995). Sensory experiences (visuals, sounds, tastes, feelings) are then attached to the cognition in creating as full an experience as possible. Adhering to this protocol has sometimes thwarted our efforts with clients. Although some of our clients have found great relief through using the standard protocol, others have felt constrained. We have found that by starting with a client's primary sensory modality for the EMDR process, progress is more rapid. Requiring clients to start with a sensory modality that is not their preferred one may lead to resistance or ineffective EMDR.

Processing After Sets

Often clients will report "traveling" or associative chaining (Shapiro, 1995) during eye movement sets. That is, they start with a target and then experience many different thoughts, feelings, or images, much like traveling on a train and watching interesting scenery pass by. However, we have discovered that many clients do not

experience this process. Sometimes, if clients are allowed to sit quietly after an eye movement set, they often will begin to process new information. One client, in particular, experienced nothing during the sets but then saw and processed many important images reflected on the office wall after the eye movement sets were terminated.

CONCLUSION

Since its inception in 1987, EMDR has had a dramatic impact on the way clinicians may approach and treat the psychological repercussions and consequences of trauma. When compared to other relaxation and exposure modalities, empirically validated studies have shown EMDR to require less time in treatment with continued alleviation of trauma effects (Lipke, 2000; Vaughn et al., 1994). As therapists, we have certainly found this to be true within our own clinical practice. EMDR has offered us a way to access and help clients digest traumatic psychological material that in some instances felt impervious to intervention.

Though research has given us insight into the effectiveness of EMDR, there is certainly a great deal more to learn—such as how it works and with what problems and with which clients it is most effective. In addition, the post-modern era is demanding an expansion of what constitutes knowledge and expertise. In this light, we must also consider the diversity of our clientele and how personal and cultural context may add to the processing of psychological material. It seems appropriate to establish a secure foundation in the use of EMDR as well as the origins of its practice and protocols (Shapiro, 1995); however, expansion of the model appears inevitable (Manfield, 1998; Phillips, 2000).

As experienced therapists, we believe EMDR provides a solid ground on which to explore and magnify the effectiveness of PTSD treatment as well as a variety of other psychological issues. When combined or enhanced with various therapeutic approaches, we have increased our success rates for those clients who are comfortable with EMDR, as well as the number of clients who find it useful. When freed from perceiving EMDR as a complete or standard treatment model, therapists may develop innovative and unique applications of the procedure that fit not only within their preferred psychotherapy models but also fit with what is most therapeutic for the client.

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