

James Madison University

JMU Scholarly Commons

Educational Specialist

The Graduate School

Summer 2016

More than meets the eye: Taking a look at EMDR in trauma-focused therapy

Karen M. Engelhard

James Madison University

Follow this and additional works at: <https://commons.lib.jmu.edu/edspec201019>



Part of the [Counseling Psychology Commons](#), and the [Theory and Philosophy Commons](#)

Recommended Citation

Engelhard, Karen M., "More than meets the eye: Taking a look at EMDR in trauma-focused therapy" (2016). *Educational Specialist*. 103.

<https://commons.lib.jmu.edu/edspec201019/103>

This Thesis is brought to you for free and open access by the The Graduate School at JMU Scholarly Commons. It has been accepted for inclusion in Educational Specialist by an authorized administrator of JMU Scholarly Commons. For more information, please contact dc_admin@jmu.edu.

More Than Meets the Eye: Taking a Look at EMDR in Trauma-Focused Therapy

Karen Moore Engelhard

A research project submitted to the Graduate Faculty of

JAMES MADISON UNIVERSITY

In

Partial Fulfillment of the Requirements

for the degree of

Educational Specialist

Graduate Psychology

August 2016

FACULTY COMMITTEE:

Committee Chair: Dr. Deborah Sturm

Committee Members/ Readers:

Dr. A. Renee Staton

Dr. Lennis Echterling

Dedication

This project is dedicated to Buck, reminding me of joy and beauty in the unseen.

Acknowledgements

I want to first thank my family and friends for their relentless support and understanding during this writing process and throughout the graduate school journey. I cannot express enough gratitude for the countless ways that you've provided for and supported me in pursuit of my passion. Thank you to all my professors – your encouragement, wisdom, guidance, and love have challenged and changed me, and I will forever treasure this opportunity I had to learn from you. And finally, to Matt and baby Buck, you have kept me going through it all. I am thankful for you, and I love you.

Table of Contents

Dedication.....	ii
Acknowledgments.....	iii
Table of Contents.....	iv
Abstract.....	v
Introduction.....	1
The Unconscious Mind	
The Impact of Trauma	
The Limits of Language	
Transforming Trauma: EMDR.....	12
Origins of EMDR	
How it Works	
Why it Works	
EMDR Efficacy	
Controversy.....	26
Discussion and Clinical Implications.....	28
References.....	32

Abstract

An abundance of research in trauma-focused therapy has been conducted and continues in the ongoing effort to increase evidence-based approaches to counseling practice. While the therapeutic intervention of Eye Movement Desensitization and Reprocessing (EMDR) has existed for decades and is now widely accepted as an effective treatment method for post-traumatic stress disorder (PTSD), it continues to be surrounded by controversy and criticism as the utility of the eye-movements and its theoretical basis are still not well understood. In this paper, I have discussed theories of trauma and the impact on mind and body, the evolution of EMDR along with its process, procedure, and proposed theoretical basis, evaluations of its therapeutic effectiveness, criticisms from the psychological community, and recommendations for clinical use and integration.

Introduction

It is a natural inclination of human nature to pursue pleasure and avoid pain. We all want to be happy by whatever definition or standard we assign to happiness. We think that in order to be happy, we must avoid the experience of pain and all emotions attached to it. However, in our attempt to avoid pain, we also minimize our ability to experience real and authentic happiness. When we seek to be happy and live a fulfilling life, we must also accept the experience of pain as a natural part of being human.

We have all experienced disappointments, failures, conflicts in relationships, betrayals, and countless emotional wounds both as children and adults. As Francine Shapiro, the founder of Eye Movement Desensitization and Reprocessing (EMDR) therapy, writes in her book *Getting Past Your Past*, “We are all on a continuum of suffering and happiness, of sickness and health, of families who contributed to our problems and those who were supportive and loving” (2012, p. 10). Our range of experience as humans varies from failure and rejection to distress outside of the “normal” woes of life, such as experiences involving combat, accidents, natural disasters, and physical, sexual, or emotional abuse. Millions of children each year are referred to state child protective services due to suspicions of abuse and neglect, and of those reports hundreds result in death related to child abuse (National Council on Child Abuse and Family Violence, 2016). Based on statistics like these and many other traumas incurred at the individual, communal, and global levels, it is not surprising that mental health concerns are increasing in frequency and intensity in our society.

Nonetheless, we are incredibly resilient in our ability to recover from pain and suffering, and many individuals embrace adversity as an inspiration for personal growth.

Our experiences of pain, whether children or adults, are not necessarily traumatic in and of themselves “provided that they occur within a responsive milieu. Pain is not pathology” (Stolorow & Atwood, 1992, p. 54). If our developmental needs are met with empathic attunement and responsiveness from a caregiver, we are more able to endure pain, and it may not evolve into a traumatic state or psychopathology.

Even in the most well-adjusted and supported individuals, traumatic experiences can leave an imprint, not just on the mind, but on the body as well. Bessel van der Kolk, a psychiatrist and pioneer in trauma research, states in his book *The Body Keeps the Score*,

Traumatic experiences do leave traces, whether on a large scale (on our histories and cultures) or close to home, on our families, with dark secrets being imperceptibly passed down through generations. They also leave traces on our minds and emotions, on our capacity for joy and intimacy, and even on our biology and immune systems (2014, p.1).

It is these cognitive and physiological imprints that, when left “unprocessed” as Francine Shapiro suggests, can lead to a fragmentation or dissociation of psychological and somatic experience, where the “past is present” (Shapiro, 2010, p. 10).

This paper seeks to consolidate the theory and research in trauma and evaluate the therapeutic intervention of Eye Movement Desensitization and Reprocessing (EMDR). EMDR continues to be criticized despite being accepted by many organizations as an evidence-based and effective treatment of trauma. The following sections will discuss the theoretical underpinnings of trauma, the rise of EMDR as an accepted treatment method, and the controversy that continues to surround the approach. Finally, recommendations

for clinical use and integration will be provided within an interpersonal therapeutic perspective.

The Unconscious Mind

The realm of psychology known as the ‘unconscious’ refers to any psychological material that exists outside of a person’s awareness. This may include thoughts, memories, and even the organizing principles themselves that drive the way in which a person’s outlook on the world operates. These organizing principles may operate in a positive manner by allowing elements to enter conscious awareness, or in a negative manner by preventing elements from entering conscious awareness (Stolorow & Atwood, 1992).

Freud famously theorized about the unconscious as “repressed instinctual drive derivatives,” where primitive instincts are repressed in a negative manner by the person’s organizing principles (Stolorow & Atwood, 1992, p. 32). According to Freudian theory, the superego acts as the filtering system controlling the drives or impulses of the id, which Freud thought to be composed of urges relating to sex and aggression (Freud, 1923). His studies of hysteria and hypnosis led to the creation of the concept of conversion, where somatic symptoms arise from unresolved or unintegrated cognitive states (Woolfolk & Allen, 2006).

While emphasizing the biological and instinctual drives that create cognitive and emotional dissonance, Freud also acknowledged the impact of traumatic childhood experiences and the ways in which they can reappear “like an unladen ghost that will not rest until the memory has been solved and spell broken” (Freud, 1955, p. 122). His ideas on conversion, which later became more generally called somatization, established the

notion that physical symptoms could be an unconscious form of communication or effort to avoid emotional pain (Woolfolk & Allen, 2006). Freud's use of free association sought to evoke the deeper unconscious content and processes, and he believed that once evoked and brought into conscious awareness, physical symptoms would then subside or disappear altogether.

Freud also believed that in addition to free association, another way of accessing the unconscious was through examining the therapeutic relationship and particularly the occurrence of transference, where the client may reenact unconscious relational patterns and experiences (van der Kolk, 2000). Through the use of free association and illumination and analysis of transference, Freud established a tradition of psychoanalysis that primarily focused on understanding the origins and context that may explain why a person feels a certain way. Freud believed the path toward healing was in insight and understanding, and the role of the therapist was to take the current issue or symptoms and translate it in terms of the narrative of the person's past.

Attachment theory, like psychoanalytic theory, places emphasis on past experiences informing present functioning. Attachment theory further elaborates on the developmental context of the unconscious. From this perspective, the principles and mechanisms organizing a person's inner world are established early in life, even before the acquisition of language. A person's early experiences are "shaped by psychological structures without this shaping becoming the focus of awareness and reflection" (Stolorow & Atwood, 1992, p. 29). This preverbal period is a critical time in an individual's life as communication occurs through "sensorimotor dialogue with caregivers" (1992, p. 32). It is in this relational context that individuals learn what

communication and affects are acceptable, according to the response of the caregiver, and also what is unacceptable. The unacceptable actions, feelings, and parts of the self are relegated to the unconscious in order to protect and maintain a relationship with a caregiver.

If a child experiences repeated moments of failure to have physical or emotional needs met, this will result in the separation of those needs into unconsciousness. Once language is acquired, a child's experience moves from preverbal to verbal where they are able to store memory in verbal symbols. The development of verbal capacity becomes the main mode through which a child experiences validation (Stolorow & Atwood, 1992).

If consciousness is able to be expressed through language or verbal symbols, then that which is unconscious is said to remain "unsymbolized" (Stolorow & Atwood, 1992, p. 32). Repression operates in preventing a developmentally threatening experience from becoming symbolized, and therefore it remains in the unconscious realm. This differs from Freud's notion of repression in that it is the affect states themselves that are experienced as threatening and unacceptable, not just merely thoughts and instinctual drives.

One of the defining characteristics of a secure attachment is a person's ability to respond with openness and flexibility (Wallin, 2007). Securely attached individuals are able to adapt to new experiences with the ability to change previously held patterns, beliefs, or ideas. However, if a person has experienced an avoidant, ambivalent, or disorganized attachment to a caregiver, then the "capacity for response flexibility associated with such alterable representations will be compromised" (2007, p. 65). An insecurely attached person most often will lack the ability to have an internalized

representation of a secure base, and thus will be less likely to demonstrate resilience and reestablish emotional stability on their own.

The Impact of Trauma

The diagnosis of post-traumatic stress disorder (PTSD) in the DSM-5 defines a traumatic event as “a catastrophic event involving actual or threatened death or injury, or a threat to the physical integrity of him/herself or others (such as sexual violence)” (American Psychiatric Association, 2013). Responses to trauma are often characterized by symptoms of hyperarousal, intrusive thoughts such as nightmares and flashbacks, and emotional avoidance, numbing, or dissociation (Beaumont & Martin, 2013). While the body’s instinctual traumatic reactions such as the urge to fight, flee, or freeze are intended to protect the self in stressful situations, there may be inadvertent consequences that may perpetuate fear responses that could potentially lead to the development of PTSD (Kennedy, 2014).

Van der Kolk (2000) defines trauma as any experience, event, or series of events that reorganizes or defines memories. From a neurobiological perspective, the experience of trauma changes the organization of the brain and its ability to manage perceptions. If the mind fails to “fully observe and own what has happened,” then memories are distorted and unable to be integrated into a coherent narrative of experience (2000, p. 3). These unintegrated memories carry the emotions, images, sensations, and muscular reactions associated with the trauma that are re-lived and re-experienced with incredible vividness and intensity.

When trauma occurs, memories can be dissociated or prevented from becoming fully integrated into a person’s autobiographical story, moving from the conscious to the

unconscious realm (van der Kolk, 2000). Individuals who have had disorganized attachments to their caregivers have experienced significant interpersonal trauma that may have a profound somatic effect (Wallin, 2007). The unconscious affect states that were invalidated or misattuned can translate into physical states where the person's ability to regulate affect is disconnected from bodily sensations and autonomic responses. Because of this overwhelming bodily experience that is difficult to articulate and make sense of, individuals typically react through denial and dissociation in an effort to escape and numb their mind and body (Mollon, 2004).

Trauma is not limited to meeting the criteria necessary to diagnose as PTSD (Luber & Shapiro, 2009). An event or experience can negatively impact on the self regardless of the symptom profile, type of trauma, or time when it occurred. Whether or not a person who has experienced a trauma develops PTSD, "small t" traumas are just as impactful and can alter a person's ability to integrate memories in the same way as someone diagnosed with PTSD. In fact, most traumas do not meet the criteria for PTSD but often are the underlying force and potentially the origin of many other emotional, cognitive, and physical problems. Knipe (2014) describes both "traumas of commission" and "traumas of omission," where the former refers to direct exposure to traumatic events, and the latter describes developmental trauma of "failure to receive adequate nurturing, mirroring, engagement, or guidance during childhood" (p. 5).

It is the traumas of omission that may be buried under layers of self-protection and coping mechanisms that are less obvious but just as damaging as traumas of commission (Knipe, 2014). Stolorow & Atwood (1992) describe in *The Context of Being* how trauma, particularly within relationship to the caregiver, affects the individual "in the

experience of unbearable affect” (p. 52). Developmental trauma is characterized by “a breakdown of the child-caregiver system of mutual regulation—leading to the child’s loss of affect-regulatory capacity and thereby to an unbearable, overwhelmed, disintegrated, disorganized state” (1992, p. 53). Individuals who have experienced developmental trauma have increased difficulty in expressing the affect that was threatening to the caregiver relationship and dissociates the painful affect in order to maintain the relationship. While this response may guard against threats to the relationship, the resulting consequence is often disconnection of the mind and body where protective mechanisms act to shield from further potential injuries, whether in relation to the caregiver or possible attachment figures.

It is difficult to predict how a person will respond to trauma. Depending on the kind of trauma as well as the person’s existing protective factors both prior to and at the time of the trauma, an individual could respond in numerous ways. Some may cope well and have the ability and resources to process the trauma when it occurs, and some may recover spontaneously from initial stressful reactions (Shapiro, E., 2012). Others react with high levels of distress, and they may develop more chronic symptoms. Some individuals may respond with initial resilience, yet the latent effects of the trauma emerge later on.

The “delayed onset” of the effects of the trauma can be one of the great challenges of working with survivors of trauma. It may appear at the time of the traumatic event that a person is responding well, and may or may not experience symptoms related to the event at a later date. According to the National Institute for Clinical Excellence (NICE), a majority of people exposed to trauma do not develop

posttraumatic stress disorder (2005). However, one third of people remain symptomatic for three years or more and have a greater risk of secondary complications. Particularly when trauma occurs during childhood, a person's personality can develop separate sides "which may or may not be fully aware of each other, and which may have different purposes, functions, values, agendas, histories, perceptions, and predictions about the anticipated future" (Knipe, 2014, p. 8). Trauma manifests in individuals in many different ways, and different circumstances, events, or relationships might trigger trauma reactions unexpectedly.

The Limits of Language

Traumatic experience involves emotional intensity and associated pain that feels unbearable, and the cognitive self struggles to intellectualize and make sense of such emotional intensity. Van der Kolk (2014) states that there are "pangs too sharp, griefs too deep, ecstasies too high for our finite selves to register. When emotion reached this pitch the mind choked; and memory went white till the circumstances were humdrum once more" (p. 232). This vivid depiction of the separation of the mind and body illustrates the process when emotion becomes so intensely visceral that it leads to an out-of-body experience.

In traditional psychotherapy that focuses on the verbal content of what a person brings to the counseling session, it can be a difficult and lengthy process of uncovering trauma and making sense of its current impact. A large part of the difficulty in this process is due to the client's inability to verbally express or sometimes even know what traumatic experience took place and its lingering effects. David Wallin describes in *Attachment in Psychotherapy* the concept of the "unthought known," stating "what we

‘know’ but do not (or cannot) think about is also what we cannot talk about” (2007, p. 115). The “unthought known” captures the heart of the idea that traumatic experience will leave an imprint on a person, whether they are aware of it or can put it into words or not.

As stated previously in discussing the development of unconscious material during the preverbal period, early relational experiences are internalized “as representations, rules, and models that cannot be linguistically retrieved” (Wallin, 2007, p. 113). Freud sought to access this unconscious material through free association and dream analysis in order to put these mental representations into words and narratives that can be interpreted. However, as increased research and practice has been conducted in trauma therapy and along with it a greater and more nuanced understanding of trauma theory, experiential engagement through various modes of intervention is thought to be preferable to solely employing talk therapy.

Through experiential therapy, the client is able to access the representations, rules, and models that are expressed in nonverbal manners (Wallin, 2007). It is this focused attention on the nonverbal dimension of the person that will illuminate the learning that occurred during the preverbal period of life. It is this essential component of focusing on the body that can be transformative in the “unlearning” of old and ineffective behaviors and patterns, and new patterns and ways of being can emerge in the context of the therapeutic relationship.

It does not matter how a person becomes disconnected between mind and body experience or the reason for their inability to verbally articulate something. Whether due to intentional cognitive and emotional suppression or unintentional dissociation, it is nonetheless critical for a person to process the things that may be difficult to verbally and

emotionally access. Once this processing has occurred, it is more likely that a person is able to “come to terms with what has happened and go on with life” (van der Kolk, 2000, p. 5).

Processing of past or present trauma can certainly involve putting what has happened into words, possibly for the first time. It can be incredibly empowering for a person to tell his or her story as well as constructing a new narrative of how the past fits into the present and the future. But there are times when words fail to capture the essence of an experience, or when words do not come at all. Not only is language itself a limitation in expressing a trauma story, but it also does not change the physical responses of the body that occur automatically in reaction to internal and external triggers (van der Kolk, 2014). A person may continue to respond with hypervigilance, numbness, or other kinds of reactions of hyperarousal and dissociation. In order for real change to take place, the person must learn that the threat no longer exists and to live in the reality of the present.

The evolution of affects from when they are first experienced as bodily sensations into symbolic language that can be verbally articulated requires empathic attunement in order to be fully integrated and allow for the emergence of defined feelings (Stolorow & Atwood, 1992). When a person can experience “affects as mind (i.e., as feelings) rather than solely as body thus depends on the presence of a facilitative intersubjective context” (1992, p. 42). Without this “intersubjective context” or relationship in which a person can experience affect attunement, a person will likely continue to experience affects unconsciously and as bodily states.

It is imperative that psychotherapy allows for a therapeutic space where empathic attunement is fostered and that as much of the person's experience as possible is able to be expressed, including bodily experience. When working with survivors of trauma, the "talking cure" will be less effective and less integrative if it is only "a conversation between talking heads. Bodily sensation is always the substrate of emotion: To a considerable extent what we feel physically is what we feel emotionally" (Wallin, 2007, p. 130). If therapy is restricted to focusing on the words exchanged, the underlying context and fullness of experience will be missed.

In John Bowlby's work in child development and attachment theory, he proposed that "the child will integrate only what her attachment relationship(s) can accommodate" (Wallin, 2007, p. 116). The counselor must seek to elicit and be carefully attuned to the undeveloped and unintegrated affects and parts of the self that were once threatening and that the person may be unable to verbalize. It is essential to pay attention to what is communicated nonverbally not only to process previous experiences but to create new ways of engagement.

If disconnection and dissociation from bodily experience is part of the problem in recovery and healing with survivors of trauma, then the focus of treatment should be association and integration (van der Kolk, 2000). Part of increasing awareness of bodily states and feelings involves assisting in the development of mindfulness. If clients can heighten their awareness of their physical body along with all of its sensations and experiences in the present moment, they might find ways of altering these automatic responses and intentionally practice healthy ways of coping.

An intervention in psychotherapy that seeks to integrate mind and body experience is Eye Movement Desensitization and Reprocessing, or EMDR. The following section provides an overview of EMDR and the process by which it has become an accepted treatment method of trauma, particularly in cases of PTSD. Even though it was introduced several decades ago, EMDR continues to draw scrutiny and skepticism from psychological and scientific communities.

Transforming Trauma: EMDR

The goal of trauma treatment is to help people integrate the past into the present so that they are able to fully experience the present and move forward with their lives (van der Kolk, 2014). This goal can be achieved through various modes of treatment, but generally it is accomplished by talking or “top down” therapy, psychopharmacological interventions to control the body’s symptoms and reactions, and “bottom up” approaches of allowing the body to have experiences that promotes a new ways of being. In many cases a combination of these categories of treatment methods are used. EMDR could be categorized as a “bottom up” approach as it seeks to uncover the layers of the impact of trauma through intervening first with the body’s automatic reactions.

EMDR was developed by Francine Shapiro to resolve the development of trauma-related disorders caused by exposure to distressing, traumatizing, or negative life events. According to Shapiro’s theory, when a trauma or intense distress is experienced, it can overwhelm usual cognitive and neurological coping mechanisms (Shapiro, 2001). The memory and associated stimuli of the event are inadequately processed and dysfunctionally stored in an isolated memory network (Shapiro, 2001). EMDR therapy

claims to help process these distressing memories and reduce associated symptoms, allowing clients to develop more adaptive coping mechanisms.

Around the time EMDR was introduced in the psychological field there was a wave of interest in alternative therapies that did not depend solely on dialogue and verbal communication in relation to trauma. EMDR claimed to be able to quickly and effectively integrate traumatic memories (van der Kolk, 2000). The initial studies conducted asked individuals with PTSD to focus specifically on the emotions, sensations and meaning of the traumatic experience while also being asked to track the hand of a clinician who prompts slow and repetitive eye movements. While having many overlapping mechanisms and appearing very similar to hypnosis, EMDR became the more preferable treatment method after the development of a distinct treatment protocol and procedure. The development of this user's guide to EMDR made it easier for clinicians and researchers to conduct studies in order to draw conclusions about treatment outcomes.

EMDR claims to desensitize survivors of trauma to their hyperarousal responses and panic symptoms and decrease the intensity and vividness of the traumatic memories. The technique claims to promote transformation beyond strictly behavioral desensitization and suggests that EMDR will enhance self-esteem and positive sense of self (Luber & Shapiro, 2009). Francine Shapiro promotes the importance of EMDR beyond the treatment of trauma that is also distinct from cognitive behavioral and psychodynamic therapies. The core of the theory behind EMDR is that "unprocessed memories are the actual cause of the wide range of symptoms, including negative beliefs, emotions, sensations, and behaviors that make up most of our diagnoses" (2009, p. 225).

Whether it is fear, anxiety, depression, anger, shame, a sense of helplessness, a belief that ‘I am not lovable’—all of these experiences, according to EMDR theory, are simply the result of unprocessed and unintegrated memories.

EMDR theory suggests a redefinition of the source of the pathology (Luber & Shapiro, 2009). While the idea of present problems being rooted in past experiences is not new by any means to the field of psychology, EMDR proposes that it is the dysfunctional storage of the past memory, not the experience itself, that causes the present problems and symptoms (E. Shapiro, 2012). While it could be categorized as an intervention from a behavioral orientation, proponents of EMDR claim that it is the integration of trauma memories that results in symptom relief rather than focusing on symptom relief through desensitization (Luber & Shapiro, 2009).

Shapiro claims that EMDR is an integrative approach and can be used in conjunction with other forms of psychotherapy. There are many parallels to psychoanalysis, cognitive behavioral therapy, experiential therapy, and other approaches that highlight the use of mindfulness and focused attention on the feelings, thoughts, and sensations of the present moment. In EMDR, the individual is asked to focus on their experience in the moment as they are recounting the traumatic experience. It is a close comparison to Freud’s efforts to activate unconscious material through the use of free association (van der Kolk, 2000).

The following sections explain the origins of EMDR, how it works, and discusses further the adaptive information processing theory behind it. Other theories of the mechanisms behind why EMDR has been effective will be discussed. Finally, the

evidence supporting the efficacy of EMDR will be presented in order to understand how it became to be such a widely accepted approach to trauma treatment.

Origins of EMDR

Francine Shapiro, the originator of EMDR, was a clinical psychologist who became interested in the interaction between mind and body, both in reaction to the research in the field at the time as well as her personal battle with cancer. She developed an increased ability to self-monitor through disciplined practice in order to analyze her own mind and body. In an effort to increase her understanding of the interconnectedness of mind and body, Shapiro was able to notice in particular her eye movements and their impact on disturbing thoughts.

Shapiro describes her chance discovery of EMDR while walking in a park one day in 1987 (Shapiro, 1995). As she was walking, she noticed that some of her negative thoughts suddenly disappeared when she noticed her eyes spontaneously moving back and forth. When she deliberately tried to return her attention to the previously negative thoughts, she found that they were not as distressing as before. Following this experience in the park, Shapiro sought to simulate the same results that she had through conducting controlled studies that supported her hypothesis that eye movements can produce spontaneous change in a person's dysfunctional thoughts and potentially trauma-related cognitions. She believed that she had "stumbled on a natural physiological process that we all had," and she began focusing her research in this area that she called Eye-Movement Desensitization (Luber and Shapiro, 2009, p. 219).

Shapiro began using EMD with classmates, colleagues, and friends to analyze the effect on those she knew before beginning to apply it to a diagnosed population. She

realized that old memories were the easiest to work with, and because of this she found that the individuals most troubled by old memories were those who had experienced sexual violence. Her first controlled study was conducted with a group of primarily sexual assault victims. At the time, she was focused on EMD as a desensitization technique and devoted effort to removing primary responses of fear and anxiety. This took place in 1987, and at that point there had been only one published randomized study on PTSD which evaluated biofeedback assisted desensitization with eight combat veterans. She published her paper in 1989, and even though PTSD had been accepted as a diagnosis since 1980, there were no validated treatments for trauma at that time.

Shapiro began to change her view of EMDR as a purely behavioral desensitization as she delved deeper into understanding the brain. She was inspired by the work of Lang, who focused on the notion of memory networks related to cognitive and emotional information processing (Luber & Shapiro, 2009). Shapiro incorporated this into her theory of EMDR as a conceptualization of information processing rather than simply a behavioristic reduction of arousal related to fear and anxiety. The word “reprocessing” was then added to Shapiro’s coined EMD in 1991 to reflect this change in perspective.

How it Works

The general protocol of EMDR treatment follows a three-pronged approach that encompasses a past, present, future focus (Wesselmann & Potter, 2009). The first stage involves reprocessing of early memories. The second stage uses EMDR to target and reprocess recent or current situations in the client’s life that trigger negative associations related to the past. In the third stage, the clinician and client create a visualization of the

client behaving more effectively in the future and reinforce the image with bilateral stimulation (Shapiro, 2001).

EMDR involves eight phases of treatment: client history and treatment planning, preparation, assessment, desensitization, installation, body scan, closure, and reevaluation (Sikes & Sikes, 2003). The process begins with the therapist conducting a client history and intake screening and identifying the relevant symptoms and behaviors. In the preparation phase, focus is heavily placed on building rapport and establishing the therapeutic relationship. Survivors of trauma often question their own safety and vulnerability, and trust may be difficult for them to establish. (Knox, 2002). Therefore, active listening and empathic communication in a genuine and warm presence are essential to establishing rapport and engagement with the client. During this phase the client is also educated on EMDR treatment in order to have appropriate and realistic expectations (2003). It is important to educate the client so that the process can be collaborative, and it also encourages stability and perseverance during the desensitization phase when the client will likely experience painful emotions. Spending time during the preparation phase to enhance stabilization and strength personal resources such as self-compassion will help the desensitization and installation phases to be more successful (Shapiro, 1995). Often during this time the client will be asked to identify a 'safe place', which may involve an image of a person or a place that provides comfort (Shapiro, 2001).

After rapport has been established and intake history has been conducted, the client then selects a target image that represents the trauma as part of the assessment phase (Knox, 2002). This could be in the form of intrusive images or flashbacks,

nightmares, or other trigger that evokes intense feeling and imagery. EMDR protocol suggests that the earliest and strongest memories should be processed first because they may be the foundation for the present distress (Beaumont, 2013). It is also necessary for the client to identify both negative and positive cognitions that relate to the targeted memory so that the client can begin to translate the memory into words (Sikes & Sikes, 2003).

After the target image or experience is identified, the client is asked to rate their negative cognitions associated with the target image through the Subjective Units of Disturbance (SUDS) scale, and the alternate positive cognition on the Validity of Cognition (VOC) scale (Knox, 2002). These assessments rank the client's scores from 0 to 10 on a scale of severity, and they are administered before and after each counseling session to track changes in those thoughts and feelings (2002). The use of pre and post intervention testing allows both the client and therapist to receive immediate feedback and to assess the effectiveness of the treatment.

The desensitization phase incorporates the use of lateral eye movements while the client recalls the target image and experiences triggering emotions. Elements of mindfulness are incorporated and encouraged particularly during this phase. The therapist may say "Simply notice and let whatever happens, happen" (Beaumont, 2013). This is important in order to encourage the client to push through the difficult emotions and sensations when they have previously avoided such experience.

The client focuses for a set of about 30 seconds on aspects of the targeted experience while simultaneously tracking therapist-directed horizontal eye movements (Beaumont, 2013). After each set, the client discusses any related material that was

elicited during the set, and this material becomes the focus of the next set. Once the earliest and most distressing memories have shown a decrease in level of distress, more recent memories can be targeted for further processing.

If the client is experiencing such heightened distress that stalls the process, the therapist might use an “interweave” and change the focus in order to restart the process (Beaumont, 2013). The therapist might interrupt the process if the desensitization level is unchanged after two consecutive sets (Shapiro, 2001). The EMDR process emphasizes the minimal role of the therapist in order to not interrupt or intrude on the client’s natural processing. “Interweaves” of reassurance might be helpful if used minimally, such as occasionally saying “You’re doing well” or “I’m here with you” (Beaumont, 2013). Another example could be saying something like “Imagine the image is on a screen a long way away from you” (2013). Such subtle interventions can help continue the process if the client seems to be stuck.

During the desensitization phase, other forms of bilateral stimulation may be used in place of eye movements, such as tapping or audio tones (Sikes & Sikes, 2003). It is important that a nondirective approach is used so that the counselor avoids influencing the process through interpretation or reframing of the images, thoughts, and feelings (Knox, 2002). This allows for the client to reprocess the reactions in their own way rather than being instructed or coached on how to interpret their experience. This phase continues until the client provides a rating of ‘0’ or ‘1’ on the SUD scale (Sikes & Sikes, 2003).

Following desensitization through bilateral stimulation, the installation phase attempts to install more positive and adaptive cognitive and affective responses (Knox,

2002). The positive cognitions that were identified are paired with the initial disturbing memories (Sikes & Sikes, 2003). Allowing for the emergence of new responses to past trauma enables the client to think or feel differently about the traumatic event or memory.

The next phase is the facilitation of a body scan. This allows the client to be mindful of what is happening in the body in the present and identifying any tension or other somatic symptoms that could be used in additional processing (Sikes & Sikes, 2003). This sensorimotor attention allows the person to connect their emotional, cognitive, and physical experience. The therapist might instruct the client to close their eyes and locate sensations in their body (Kennedy, 2014). If client reports positive sensations and cognitions, a set of slow bilateral stimulation could help reinforce this experience.

In the seventh phase of closure, the therapist ensures stabilization of the client and prompts discussion to debrief the session (Sikes & Sikes, 2003). The therapist will help the client to think about what it will be like in between sessions and try to anticipate the potential of disturbances arising. The therapist might also request that the client keep a daily journal and note any disturbing thoughts, feelings, or sensations that might arise between sessions. The final phase of EMDR is reevaluation. During this phase, the client's progress is evaluated, and planning for the future occurs. If during the evaluation it is determined that progress does not seem sufficient, then new material may be identified for continued work and further EMDR processing.

The EMDR process is typically completed within four to six sessions (Knox, 2002). Because grief work is not a linear process, the EMDR process can look different with different clients. There is flexibility in the process to skip stages, focus on certain

stages for longer periods of time, and move back and forth between stages. It has been reported that many individuals have experienced immediate effects of EMDR treatment. After experiencing such immediate symptom relief, trauma survivors gain greater confidence in their ability to overcome problems as well as finding hope that change can occur.

Why It Works

There are a variety of theories that exist seeking to explain the reason for the effectiveness of EMDR therapy. Some theories focus on the effects of the eye movements themselves, some on the overall mechanism of bilateral stimulation, and others on the importance of working memory and dual attention tasks (Sikes & Sikes, 2009). The process through which Shapiro discovered EMDR and the chance discovery of the eye movements has made it difficult for researchers and theorists to make sense of the mechanisms behind its effectiveness, and at present no one theory has been substantiated.

According to Shapiro, EMDR therapy is based on a model called Adaptive Information Processing (AIP), which proposes that present problems are rooted in earlier experiences that have been dysfunctionally stored in the brain and need to be reprocessed (E. Shapiro, 2012). Shapiro expanded upon the internal working model proposed by John Bowlby, the originator of attachment theory, who suggested that a child's early experiences with attachment figures lead to the development of beliefs regarding self-worth, safety, and the trustworthiness of others (Wesselman & Potter, 2009). The expansion of the model in physiological terms of the influence of early events and experiences on functioning as an adult allows for a deeper understanding of "the mechanisms driving an individual to defy logic and reason by behaving in a way that

undermines his relationships with supportive others” (2009, p. 181). Shapiro believed that dysfunctional beliefs, emotions, and behaviors are the direct result of unprocessed memories, and in order to change the symptoms, the memories must be reprocessed (Luber & Shapiro, 2009).

Shapiro has suggested in her publications that the AIP model of EMDR works because of a combination of mechanisms proposed in the various theories, and “attention on any nonemotional task allows the client to maintain an awareness of present safety while simultaneously re-experiencing the earlier traumatic material” (1999, p. 47). She has supported theories connecting EMDR with the processes that occur during REM sleep, dual attention tasks, and interhemispheric communication through bilateral stimulation (Sikes & Sikes, 2009). There can be multiple explanations for how the brain’s information processing system is activated and changes the way memories are stored (Jeffries & Davis, 2012).

According to the AIP model, when an individual experiences a traumatic event, information processing becomes incomplete and hinders new information from being combined with more adaptive information that is already held in memory networks (Jeffries & Davis, 2012). Traumatic memories are not able to be integrated with other memory networks, and semantic knowledge is disconnected from the isolated memory. As long as these memories are left unprocessed, the likelihood of developing symptoms of PTSD is great.

The theory postulating that the eye movements of EMDR therapy are similar to rapid eye movement (REM) stages of sleep is based on the belief that REM sleep deals with processing emotional information as well as organizing episodic memory into

semantic memory (Mollon, 2004). The use of eye movements in emotional processing is not a new concept, and it existed before the formation of EMDR. More than forty years ago it was believed that eye movements were associated with activation of the opposite side of the brain. Stickgold (2002) proposed that the eye movements of EMDR produced a similar brain state as that in REM sleep. Because of these parallels, the inference was made that the eye movements in EMDR aid in reducing trauma responses through changing autobiographical memories into a more generalized semantic form (Stickgold, 2002).

Siegel (2002) observed that people typically look to the left when retrieving autobiographical memories, which indicates that the brain's right hemisphere is being activated. It was also concluded that traumatic memories appeared to intensely activate the right hemisphere and the visual cortex while the linguistic left hemisphere is not activated (Siegel, 2002). It is through the use of eye movements and bilateral stimulation, theorists hypothesize, that integration of the left and right hemispheres of the brain can occur and new pathways can develop (Mollon, 2004).

Some argue that it is the bilateral stimulation alone, regardless of the use of eye movements, that produce this interhemispheric integration. This is similar to the working memory and dual attention hypotheses that propose that recalling trauma while being guided to focus on a present stimulus allows the brain to access the dysfunctionally stored experience while simultaneously accessing the intrinsic processing system (Logie, 2014). When the working memory is occupied, individuals are able to remove themselves from the trauma and make sense of it because of the new ability to experience the thoughts, feelings, and sensations without being completely overwhelmed by them.

The working memory model has the strongest empirical evidence, particularly in the explanation of the mechanism involved in the desensitization element of EMDR (van den Hout & Engelhard, 2012). When people try to do two tasks simultaneously, the working memory is taxed, resulting in memory becoming “less vivid and less emotional” (2012, p. 728). When someone recalls an emotional memory and completes a task at the same time, whether involving eye movements or not, there is less capacity for the memory to be stored in the working memory. Memory is then reconsolidated in a less vivid manner.

It is difficult to determine why EMDR has shown to be effective and to pinpoint exactly what mechanisms are the direct cause. It is possible that there are multiple mechanisms at work. Researchers may need to consider the connections between these proposed treatment mechanisms in order to obtain an integrative understanding of how EMDR works (Logie, 2014).

EMDR Efficacy

Shapiro’s early studies of EMDR were conducted with combat veterans in a VA setting (Jeffries & Davis, 2012). She had initial difficulty showing positive and significant results due to the veterans’ multiple traumatic memories, and her initial EMDR procedure facilitated a focus on one distinct traumatic memory (2012). While a decrease in disturbance may have occurred relating to one memory, it was not able to produce an overall change as other memories came into focus (2012).

Despite the difficulty in being validated and gaining credibility in its first few years, there have been many studies since that have shown positive results in the effectiveness of EMDR treatment. In 1995, Wilson, Becker, and Tinker published the

first study with civilian PTSD that showed positive effects of EMDR, and it was at this point that EMDR became less of an experimental therapy and more of a validated mode of treatment (Luber & Shapiro, 2009). Three sessions of EMDR produced clinically significant change in traumatized civilians on multiple measures. Until this time, reviews of EMDR studies criticized the flaws in methodology concerning poor controls and limitations in assessment measures (Greenwald, 1994). Since Shapiro's first studies, many other studies and analyses have been conducted through randomized controlled trials, finding that EMDR and trauma focused cognitive behavioral therapies are the most effective treatments for adults with PTSD (Logie, 2014). Many believe that the degree of consistency and stability of EMDR over time found points to the strong likelihood of a treatment effect (1994).

According to the APA report in 1998, EMDR was accepted as a "probably efficacious" treatment in addition to exposure therapy for the treatment of PTSD (Luber & Shapiro, 2009, p. 219). Today, EMDR is considered to be an empirically supported trauma treatment worldwide. It has been recognized as an effective treatment for PTSD by the American Psychiatric Association since 2004, and the National Institute for Health and Clinical Excellence (NICE) and the World Health Organization since 2005 (Logie, 2014). The U.S. Department of Veterans Affairs and Department of Defense have "designated EMDR as an 'A' level treatment" since 2010 (Shapiro, 2012, p. 194). These organizations along with others who have accepted EMDR as a credible and effective treatment for PTSD have aided in its widespread acceptance and implementation in the practice of psychotherapy.

There are many reasons why EMDR treatment is an attractive mode of therapy and could be advantageous over other methods of treatment. EMDR is reported to require fewer periods of intense exposure compared to other exposure-based therapies for PTSD (Jeffries & Davis, 2012). It may also be more appealing to clients as the procedure instructs them to hold the distressing experience in their mind rather than the need to verbalize it. EMDR, compared to prolonged exposure and cognitive behavioral therapies, requires fewer sessions overall as well as less homework in between sessions (E. Shapiro, 2012). This gives EMDR the flexibility to be used in crisis and emergency situations where it could be done in consecutive days.

Controversy

The major criticisms of EMDR fall into three main categories: the utility of the eye-movements, the overall efficacy, and its comparison to other forms of therapy (E. Shapiro, 2012). Critics of EMDR view it as a “pseudo-science” and question the claims of “rapidity, permanence, generality of its effects, and the assertion that these effects are considerably greater than those of extant treatments” (Herbert et al., 2000, p. 949). One of the reasons EMDR was met with such immediate controversy was due to Francine Shapiro’s bold claim that a single session was sufficient to show significant improvement in PTSD symptoms (Livanou, 2001). The idea of having a quick-fix therapy, especially when working with trauma that is possibly rooted deeply in a history of dysfunction, is naturally going to draw disbelief and uncertainty. The EMDR movement grew faster than many other movements in psychotherapy, and many scientists and psychologists have been cautious to accept its success until more research is conducted and a greater theoretical basis is better understood.

A common criticism of EMDR is that it is a variation of exposure or cognitive behavioral therapy (Lilienfeld & Arkowitz, 2007). Because of the focus on desensitization through confronting the traumatic memory, the parallels to exposure therapy can be drawn. EMDR encourages the client to directly experience the traumatic memory, and this is also the process of exposure therapy and its goal of decreasing symptoms of hyperarousal through repeated exposure to an adverse experience.

Others question the placebo effect of the treatment and suggest that the incorporation of other elements of therapy could be contributing to the effects of positive treatment outcomes rather than the uniqueness of the EMDR treatment (van den Hout & Engelhard, 2012). Mindfulness and mindful breathing are elements that are often used within the EMDR procedure, and the effects of EMDR may be explained by the mechanisms of self-acceptance and engagement in the present rather than other factors specific to EMDR technique. The difficulty of separating what mechanisms may be predominant in its effectiveness allow for continued confusion about the preferential use of EMDR over other treatment methods.

The efficacy of EMDR with more chronic cases of trauma is less known as most studies have focused on a single traumatic memory and have been conducted within a brief time frame (Greenwald, 1994). This is problematic in that EMDR has been accepted as an effective treatment of PTSD, but it might not be able to generalize to all kinds of PTSD cases. The general inconsistencies among the vast number of studies contributes to the ongoing skepticism of its effectiveness (Nowill, 2010). While no study is perfect, the missteps of EMDR researchers has led to ongoing opposition from many in the scientific community.

The intense scrutiny, skepticism, and resistance to the acceptance of EMDR is a necessary part of any movement's evolution. Theories and approaches must undergo interrogation in order to allow for greater dialogue among professionals and establishment of evidence to support the theory. Without questioning an approach's effectiveness and gaining understanding in its theoretical underpinnings, there would be greater risk to harming individuals in therapy and possibly doing more damage than good.

Discussion and Clinical Implications

EMDR was once at the fringe of traditional psychotherapy. It was seen as a marginal case and experimental therapy initially, but it very quickly became widely accepted in the profession and used in many practices to treat survivors of trauma (van den Hout & Engelhard, 2012). While there is still much ongoing debate and controversy surrounding it, EMDR has been institutionalized and professional organizations have been established that promote this therapy (McNally, 1999). The EMDR institute, Inc. was established to train mental health professionals in EMDR therapy. Thousands of mental health clinicians have been trained in EMDR (Herbert et al., 2000). As "traumatology" has risen in popularity and the very definition of trauma has been expanded by the American Psychiatric Association, the demand for effective trauma treatments has increased, and EMDR has greatly benefited from this change in trauma becoming more generalized.

EMDR might be easily categorized under behaviorist therapies due to the focus on symptom removal and desensitization as well as its nature of being a technique-oriented (Greenwald, 1994). Some might categorize it within a cognitive behavioral

framework as well. While there may be truth to these categorizations, clinicians of any theoretical orientation could consider incorporating EMDR into their clinical work. Regardless of theoretical orientations, EMDR should not be used as the sole method of treatment. Particularly with developmental traumas, EMDR may be useful, but will likely not be sufficient (Mollon, 2004). Clinicians can use EMDR to assist in facilitating the client's self-directed healing process in addition to other therapeutic approaches and methods.

While EMDR and other therapies incorporating techniques to integrate mind and body have helped the psychological community in developing new approaches to and understanding of trauma therapy, they have also presented new difficulties in approaching treatment. Because EMDR has claimed to demonstrate effects within three to six sessions, as a therapist it might be tempting to adhere to this time limitation and neglect establishing rapport with clients. While the use of EMDR in therapy could be an appropriate adjunct to the treatment plan, it is important to continually reassess the client's needs and be careful not to rush the process.

Francine Shapiro stated, "For those clinicians who were consistently taking 10 sessions to process a single memory with all their clients, it was an indication that they might be doing something wrong and need to upgrade their skills" (Luber & Shapiro, 2009, p. 223). Despite EMDR having a streamlined protocol in order to ensure proper facilitation, this is a problematic statement. While standardized measures can be helpful in measuring treatment progress, it is important for clinicians to also individualize and modify therapeutic approaches when the needs of the client may need to alter the course of treatment.

The issues that most clients bring to therapy are often multifaceted and more complex than the experience of a single traumatic incident. Anxiety, depression, low self-esteem, shame, addiction, difficulty in relationships, and many other issues can result from either one traumatic experience or repeated experiences of trauma (Knipe, 2014). While parts of a person might be stuck in the effects of trauma and their past, other parts of the self desire “connection with others, positive experiences, and healthy adaptation” (Knipe, 2014, p. 8). Therapists must seek to elicit this healthy adaptation in their clients, and this starts with establishing connection and trust. As stated by John Bowlby, “Unless a therapist can enable his patient to feel some measure of security, therapy cannot even begin. Thus we start with the role of the therapist in providing...a secure base” (Wallin, 2007, p. 106). Francine Shapiro also emphasized the necessity of an attuned and present therapist in order to connect with a client and allow for further work to progress (Luber & Shapiro, 2009).

Mental health means more than just a lack of suffering (Luber & Shapiro, 2009). While EMDR and other therapeutic techniques have focused on eliminating distressing symptoms, the ultimate goal should be internal growth and well-being. Decreases in symptoms and symptom severity will likely be less satisfying if not accompanied by a greater sense of awareness, empowerment, and self-acceptance. These are the crucial ingredients of psychotherapy, and when prioritized in the collaborative therapeutic relationship, resiliency and healing will follow.

References

- Beaumont, E., & Hollins Martin, C. J. (2013). Using compassionate mind training as a resource in EMDR: A case study. *Journal of EMDR Practice and Research*, 7(4), 186–199.
- Devilley, G. (2002). Eye movement desensitization and reprocessing: A chronology of its development and scientific standing. *The Scientific Review of Mental Health Practice*, 1(2), 113–138.
- Freud, S. (1915). The unconscious. *Standard Edition*, 14:159-204. London: Hogarth Press, 1957.
- Freud, S. (1923). The ego and the id. *Standard Edition*, 19:3-66. London: Hogarth Press, 1961.
- Freud, S. (1955). Analysis of a phobia in a five-year-old boy. In J. Strachey (Ed. & Trans.), *The standard edition of the complete psychological works of Sigmund Freud* (Vol. 7, pp. 249-270). London, United Kingdom: Hogarth Press.
- Greenwald, R. (1994). Eye movement desensitization and reprocessing (EMDR): An overview. *Journal of Contemporary Psychotherapy*, 24(1), 15–34.
- Greenwald, R., & Shapiro, F. (2011). What is EMDR? Concluding Commentary by Greenwald and Response by Shapiro. *Journal of EMDR Practice and Research*, 5(1), 25–28.

- Gunter, R. W., & Bodner, G. E. (2009). EMDR works . . . but how? Recent progress in the search for treatment mechanisms. *Journal of EMDR Practice and Research*, 3(3), 161–168.
- Herbert, J. D., Lilienfeld, S. O., Lohr, J. M., Montgomery, R. W., O'Donohue, W. T., Rosen, G. M., & Tolin, D. F. (2000). Science and pseudoscience in the development of eye movement desensitization and reprocessing: Implications for clinical psychology. *Clinical Psychology Review*, 20(8), 945–971.
- Jeffries, F. W., & Davis, P. (2013). What is the role of eye movements in eye movement desensitization and reprocessing (EMDR) for post-traumatic stress disorder (PTSD)? A review. *Behavioural and Cognitive Psychotherapy*, 41(03), 290–300.
- Kennedy, A. (2014). Compassion-Focused EMDR. *Journal of EMDR Practice and Research*, 8(3), 135–146.
- Knipe, J. (2014). *EMDR toolbox: Theory and treatment of complex PTSD and dissociation*. New York, NY: Springer.
- Knox, K. (2002). Case application of EMDR in trauma work. *Brief Treatment and Crisis Intervention*, 2(1), 49–54.
- Lilienfeld, S. O., & Arkowitz, H. (2007). EMDR: Taking a closer look. *Scientific American*, 17(4), 10-11.
- Livanou, M. (2001). Psychological treatments for post-traumatic stress disorder: An overview. *International Review of Psychiatry*, 13(3), 181–188.

- Logie, R. (2014). EMDR - More than just a therapy for PTSD? *The Psychologist*, 27(7), 512–516.
- Luber, M., & Shapiro, F. (2009). Interview with Francine Shapiro: Historical overview, present issues, and future directions of EMDR. *Journal of EMDR Practice and Research*, 3(4), 217–231.
- McNally, R. (1999). EMDR and Mesmerism: A comparative historical analysis. *Journal of Anxiety Disorders*, 13, 225-236.
- Metter, J., & Michelson, L. K. (1993). Theoretical, clinical, research, and ethical constraints of the eye movement desensitization reprocessing technique. *Journal of Traumatic Stress*, 6(3), 413–415.
- Mollon, P. (2004). *EMDR and the energy therapies: Psychoanalytic perspectives*. London: Karnac.
- National Institute for Clinical Excellence. (2005). *Post traumatic stress disorder (PTSD): The management of adults and children in primary and secondary care*. London: NICE guidelines.
- Nowill, J. (2010). A critical review of the controversy surrounding eye movement desensitization and reprocessing. *Counseling Psychology*, 25, 63–70.
- Schubert, S., & Lee, C. W. (2009). Adult PTSD and its treatment with EMDR: A Review of controversies, evidence, and theoretical knowledge. *Journal of EMDR Practice and Research*, 3(3), 117–132.

- Shapiro, E. (2012). EMDR and early psychological intervention following trauma. *Revue Européenne de Psychologie Appliquée/European Review of Applied Psychology*, 62(4), 241–251.
- Shapiro, F. (1995). *Eye movement desensitization and reprocessing: Basic principles, protocols, and procedures*. New York, NY: Guilford Press.
- Shapiro, F. (2001). *Eye movement desensitization and reprocessing: Basic principles, protocols, and procedures (2nd ed.)*. New York, NY: Guilford Press.
- Shapiro, F. (2012). *Getting past your past: Take control of your life with self-help techniques from EMDR therapy*. New York, NY: Rodale.
- Siegel, D. (2002). The developing mind and the resolution of trauma: Some ideas about information processing and an interpersonal neurobiology of psychotherapy. In F. Shapiro (Ed.), *EMDR as an integrative approach: Experts of diverse orientations explore the paradigm prism* (pp. 85-121). Washington, DC: APA Press.
- Sikes, C. K., & Sikes, V. N. (2003). A Look at EMDR. *Journal of College Student Psychotherapy*, 18(1), 65–76.
- Stickgold, R. (2002). EMDR: A putative neurobiological mechanism of action. *Journal of Clinical Psychology*, 58, 61-75.
- Stolorow, R. & Atwood, G. (1992). *Contexts of being: The inner foundations of the psychological life*. Hillsdale, NJ: The Analytic Press.

- van den Hout, M., & Engelhard, I. (2012). How does EMDR work? *Journal of Experimental Psychopathology*, 3(5), 724–738.
- van der Kolk, B. (2000). Beyond the talking cure: Somatic experience and subcortical imprints in the treatment of trauma. In F. Shapiro (Ed.), *EMDR as an integrative psychotherapy approach: Experts of diverse orientations explore the paradigm prism* (pp. 57-84). Washington, DC: APA Press.
- van der Kolk, B. (2014). *The body keeps the score: Brain, mind, and body in the healing of trauma*. New York, NY: Penguin Books.
- Wallin, D. (2007). *Attachment in psychotherapy*. New York, NY: The Guilford Press.
- Wesselmann, D., & Potter, A. E. (2009). Change in adult attachment status following treatment with EMDR: Three case studies. *Journal of EMDR Practice and Research*, 3(3), 178–191.
- Wilson, S. A., Becker, L. A., & Tinker, R. H. (1995). Eye movement desensitization and reprocessing (EMDR) treatment for psychologically traumatized individuals. *Journal of Consulting and Clinical Psychology*, 63(6), 928–937.
- Wolpe, J., & Abrams, J. (1991). Post-traumatic stress disorder overcome by eye-movement desensitization: A case report. *Journal of Behavior Therapy and Experimental Psychiatry*, 22(1), 39–43.
- Woolfolk, R. L., and Allen, L. A. (2006). *Treating somatization*. New York, NY: The Guilford Press.