EMDR: Promise and Dissent

New research enters debate over a highly touted trauma therapy

By BRUCE BOWER

Scientists rarely sound as apologetic as Charles R. Figley did after discussing his latest investigation at the American Psychological Association's annual meeting in New York City this August. "I'm taking a major risk in presenting such odd and unusual techniques to you," Figley told the assembled clinicians. "But these are potentially revolutionary treatments for traumatic stress reactions."

Figley, a psychologist at Florida State University in Tallahassee, and Joyce L. Carbonell, also of Florida State, reported that brief participation in any of four controversial therapies had yielded enduring psychological benefits for 48 people plagued by life-disrupting aftereffects of rape, childhood sexual abuse, military combat, or other traumatic experiences. One of those therapies was eye movement desensitization and reprogramming (EMDR).

Since its introduction in 1989, EMDR has swirled in the eye of a cultural and clinical storm. It made its debut as psychotherapists were fielding demands from a growing number of clients to treat trauma-related problems. At the same time, intense clinical and legal controversy focused on the accuracy of traumatic memories elicited during psychotherapy (SN: 9/18/93, p.184).

Researchers and clinicians have alternately called EMDR a major advance in trauma treatment or a bizarre, potentially harmful fad. The therapy's active ingredient may be its emphasis on mentally reliving traumatic experiences in a structured way, a tactic long used successfully in various forms of exposure therapy, critics say. Yet EMDR continues to prompt a burgeoning number of research efforts.

Proponents and doubters agree only that scientific evaluations to date offer little insight into how EMDR produces the rapid psychological resolution of trauma claimed in many clinical reports.

"We don't know much about how any form of psychotherapy works," asserts Steven M. Silver, a psychologist at the Veterans Affairs (VA) Medical Center in Coatesville, Pa. "But I've treated combat veterans since 1972, and nothing else I've tried comes close to EMDR in effectiveness, speed of relief, and lack of harm to patients."

Silver administered EMDR in several 90-minute sessions during the course of a week to randomly selected participants in Figley's study. Experienced practitioners also conducted the other three treatments on a random basis during that week. The treatments share an emphasis on confronting past traumas in one's imagination and identifying emotions and sensations linked to events that continue to cause mental anguish. Unique aspects of each treatment, such as the therapist tapping a series of body points on the client, elicit the most skepticism from mainstream clinicians.

Many volunteers entered the study suffering from post-traumatic stress disorder (PTSD), Carbonell says. Traumatic stress symptoms, anxiety, depression, and physical complaints dipped significantly in people who completed one of the treatments, Carbonell says. Six months later, participants reported that the initial gains remained largely intact.

The study did not include a group given only emotional support or some other placebo control, but researchers generally consider PTSD resistant to placebos. In support of this view, Carbonell notes that participants routinely cited prior failures with a bevy of other therapeutic approaches. Even a placebo that yielded promising results after a week would probably have little effect after 6 months, she contends.

Of the four trauma treatments studied at Florida State, EMDR has made the greatest inroads on clinical practice. Approximately 14,000 therapists worldwide have taken training in the technique, according to Francine Shapiro, a psychologist at the Mental Research Institute in Palo Alto, Calif.

In 1987, Shapiro first noticed that her own distressing thoughts lost their intensity when she moved her eyes rapidly from side to side. Two years later, she published her initial finding that EMDR eased trauma symptoms better than a comparable approach without eye movements. That study consisted of 22 survivors of rape, sexual abuse, or Vietnam combat.

Since then, Shapiro has modified some aspects of the therapy, which she outlines in *Eye Movement Desensitization and Reprocessing* (1995, Guilford Press, New York).

A session of EMDR usually lasts about 90 minutes. The client first thinks about the earlier trauma and comes up with an image from the incident. He or she then chooses a current negative belief that goes with the image and a desired positive attitude toward it. A sexual abuse survivor, for instance, might come up with "I am damaged for life" and "I'm safe now," respectively.

While concentrating on the trauma image and the associated negative thought, the client describes his or her emotions and ranks their intensity on an 11-point scale. The client also notes physical sensations triggered during this exercise.

At this point, the therapist holds up two fingers and moves them back and forth across the client's visual field, usually about two dozen times. The client follows the movements solely with his or her eyes. Alternating side-to-side hand taps or sounds, or visual fixation on a point in space can be used instead of eye movements, Shapiro says. Client and therapist talk over the feelings and new images that appear during this process, rate their intensity, and move on to a second set of eye movements. They repeat this process until the client reports significantly reduced emotional responses to the trauma image.

The therapist then directs the client's eye movements as he or she thinks about the trauma image and the positive statement. When the client reports substantially greater comfort with the positive statement, often accompanied by new insights into or memories about the trauma, this phase of EMDR ends.

Clients write down disturbing thoughts, images, and dreams that occur from day to day so the therapist can address the most important ones at the next session. EMDR often consists of no more than 10 to 20 sessions.

Preliminary evidence indicates that electrical activity in the right and left hemispheres of the brain becomes more synchronous following successful EMDR. Improved communication between brain hemispheres—sparked by their alternating activation in EMDR—may break through conditioned fear responses to the original trauma, Shapiro suggests. As traumatic memories seep into consciousness, she further speculates, EMDR links them to less disturbing thoughts.

Most of the nine published EMDR studies that include both a comparison treatment and at least 10 participants suffering from PTSD report a marked reduction of symptoms, Shapiro says. The latest, directed by Sandra A. Wilson of the Union Institute in Colorado Springs, will appear in the December JOURNAL OF CONSULTING AND CLINICAL PSYCHOLOGY.

Wilson and her coworkers randomly assigned 80 adults to one of two groups. All participants received three 90-minute EMDR sessions, but the second group began treatment a month after the first. All of the volunteers cited distressing, intrusive memories about past traumas, such as physical abuse, rape, death of a loved one, or military combat, and 37 of them exhibited PTSD.

Most participants experienced a sharp reduction in trauma-related problems and anxiety, as well as a better-adjusted interpretation of their traumatic experiences, for up to 1 year after completing EMDR. The delayed-treatment group exhibited no improvement until after entering EMDR treatment.

A psychologist who took no part in the treatments and knew little about EMDR rated each participant's condition at several follow-up intervals.

In a study of more than 90 combat veterans diagnosed with PTSD, Silver finds that EMDR produces much more improvement than biofeedback or relaxation training. Heart rate and skin temperature drop markedly after successful EMDR sessions, signaling the presence of physiological calming when the treatment works, Silver asserts.

Some investigators assert that EMDR combines superfluous finger waving with the previously documented benefits of exposure therapy, in which people mentally confront past traumas and redefine their meaning in constructive ways.

In a study of 61 combat veterans with PTSD, comparable improvement occurred in groups receiving five to eight sessions of either a standard exposure therapy or EMDR, according to Patrick A. Boudewyns, a psychologist at the VA Medical Center in Augusta, Ga. A third group that participated only in group therapy displayed no change in PTSD symptoms, Boudewyns told the APA meeting.

Exposure therapy of all kinds cuts through the conditioned fear and stress reactions set off by thoughts about the original trauma, he argues. For instance, veterans who had completed either EMDR or exposure therapy displayed comparably large heart rate drops when reading accounts of their combat experiences.

Yet therapists and clients alike in Boudewyns' study cited a marked preference for EMDR because it provoked less intense emotions at first. Exposure therapy typically dredges up painful feelings in its early stages, and these take a heavy toll on all involved, he holds. For that reason, therapists often refrain from using exposure approaches.

"It looks to me like exposure techniques are what's really important, and you can use or not use eye movements if you want to," Boudewyns maintains.

Terence Keane, a psychologist at the VA Medical Center in Boston, agrees. Optimistic research findings regarding EMDR remain difficult to interpret, he asserts.

"There's no good theoretical basis for understanding how EMDR supposedly works so well and so fast," Keane argues. "I don't see a quick fix coming in trauma treatment, although I'd love to be proved wrong."

Harsher criticism of EMDR comes from James D. Herbert of Hahnemann University in Philadelphia and Kim T. Mueser of Dartmouth Medical School in Hanover, N.H. EMDR lacks solid scientific credentials as a trauma treatment, the two psychologists contend. Nonetheless, it is being promoted as a panacea for a growing list of problems, including panic disorder, eating disorders, depression, and drug abuse, the two psychologists write in the August HARVARD MENTAL HEALTH LETTER.

"Public trust in the mental health professions is eroded when faddish treatments make exaggerated claims that inevitably fall under the weight of scientific evidence and the disillusionment of practitioners," Herbert and Mueser conclude.

EMDR offers hope, not hype, to clinicians, responds Shapiro. However, even the technique's most ardent supporters cannot explain how it works. One intriguing theory comes from a study of four brain-damaged patients who suffered partial paralysis but remained unaware of their restricted movement. Vilayanur S. Ramachandran, a neuroscientist at the University of California, San Diego, conducted this research before learning of its relevance to EMDR.

Repetitive eye movements or certain other forms of stimulation may yank submerged memories into awareness by altering communication between the right and left sides of the brain, Ramachandran theorizes. In neurologically healthy people, he argues, the left hemisphere orchestrates a coherent personality and view of the world by folding new experiences into preexisting beliefs and assumptions; psychological defenses such as denial and repression assist this left-brain effort. In contrast, the right hemisphere acts as a devil's advocate that, when necessary, bursts through defenses and organizes a revision of the internal status quo.

A breakdown of this hemispheric relationship may plague some stroke patients who develop temporary paralysis on the left side of the body because of damage to the right hemisphere, Ramachandran reports in the March CONSCIOUSNESS AND COGNITION. His patients vigorously denied their paralysis and displayed no underlying appreciation of their condition, such as favoring one-handed tasks over two-handed tasks, he asserts.

Ramachandran irrigated one patient's left ear canal with ice-cold water, a procedure known to cause a series of involuntary eye movements and to shift spatial perceptions by stimulating the vestibular system of the inner ear. Immediately thereafter, the woman acknowledged that she had been unable to use her left arm for several days. She also lacked awareness that she had previously denied her paralysis.

Eight hours later, after vestibular stimulation had worn off, the woman again claimed her left arm could move and denied ever having said otherwise.

Vestibular stimulation triggers eye tracking that may mimic rapid eye movements during both dream sleep and EMDR, Ramachandran proposes. As a result, a revved up right hemisphere may salvage an awareness of paralysis in stroke patients, retrieve traumatic memories during EMDR, and recruit consciously threatening thoughts into dreams for a realistic, safe simulation, he suggests.

If his theory holds up, EMDR should work best when it targets the right hemisphere by having clients move their eyes only to the left side of the visual field.

"The link between my observations and the proposed effects of EMDR is tantalizing, but there's a need for better controlled studies of EMDR before it achieves legitimacy," Ramachandran says.

Figley hopes that his project will stimulate such research. Until then, he vows to keep an open mind about EMDR, as well as other controversial trauma therapies.

"I don't care if [proponents of these therapies] stand on their heads and sing 'Yankee Doodle,'" Figley holds. "I'm interested in whether their approach works." □