

# EMDR Treatment of Recent Trauma

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Although eye movement desensitization and reprocessing (EMDR) has demonstrated efficacy in treating chronic posttraumatic stress disorder and old trauma memories, EMDR treatment of recent traumatic events has not received adequate attention from EMDR researchers or clinicians. This article presents current thinking and findings about early psychological intervention following recent traumatic events and examines the status of early EMDR intervention (EEI) concepts and research. It is contended that this area has not developed sufficient awareness and definition among EMDR clinicians. Francine Shapiro's theoretical adaptive information-processing model predicts that dysfunctionally stored trauma memories underlie many current psychological disorders. Consequently, the assumption that memories of a recent traumatic event and its sequelae are not fully consolidated offers a unique role for EEI not only in reducing acute distress but also in preventing the sensitization and accumulation of trauma memories. A call is made for a more comprehensive approach to the field of EEI to promote interest and awareness among EMDR practitioners and to generate research.

**Keywords:** early EMDR intervention; early psychological intervention; recent trauma; acute stress disorder; prevention of PTSD

**E**ye movement desensitization and reprocessing (EMDR) is a psychotherapy that was developed to resolve traumatic memories. Twenty years after its original introduction (F. Shapiro, 1989), EMDR now has established efficacy in the treatment of posttraumatic stress disorder (PTSD) (for a comprehensive review see Schubert & Lee, this issue). However, research has almost entirely focused on addressing memories of old events, and there are only a few clinical and field reports on the utility of applying EMDR to recent events. Not one controlled study has been conducted to investigate the effectiveness of early EMDR intervention (EEI). Although various specialized protocols for EEI have been proposed, research evaluating their effectiveness has been rare.

In the Cochrane Systematic Review and Meta-Analysis of Multiple-Session Early Interventions Following Traumatic Events (Roberts, Kitchiner, Kenardy, & Bisson, 2009), EMDR does not appear at all. Does this mean that EMDR treatment of recent traumatic events is out of touch with what is happening in the field? If EMDR is not going to be included in the Cochrane Review of Early Psychological Interventions, it is not on the map of early psychological intervention (EPI).

Information and evidence relating to EEI and the general field of EPI is presented here to inform and inspire and to indicate what may be lacking and the gaps that exist that EMDR may be well equipped to fill. EEI could be an important time to intervene. This is where we should be directing our attention.

## EEI

### Standard EMDR Protocol

Table 1 shows the main EEI protocols in the literature organized along a time line in accordance with DSM IV diagnoses. During the standard EMDR protocol, the first two phases of therapy collect history and ensure preparation for treatment. In phase 3, the client identifies the most distressing moment of the targeted event and identifies the representative image and related cognitive, affective, and somatic components. The client provides a rating of subjective units of disturbance (SUD), where 0 = no disturbance and 10 = worst possible disturbance. Next, in phase 4, the client focuses on the memory for about 30 seconds while simultaneously engaging in bilateral stimulation (BLS; eye movements, auditory or tactile stimulation), after which associative

**TABLE 1. Time Line of Recent Trauma and Responses: Diagnoses, EEI Protocols, and Statistics**

Time after "T"	0 → 2 Days	2 Days → 1 Month	1 Month → 3 Months	3 Months →	
Diagnosis	TSS/ASR	TSS/ASR	ASD	Acute PTSD	Chronic PTSD
Main EEI protocols	ERP	EMD/RE R-TEP	EMD/RE R-TEP	Standard EMDR protocol	
Other protocols	Kutz	Group (EMDR-IGTP); Kutz		Group (EMDR-IGTP)	
Response	TSS/ASR ubiquitous	13%–19% exposed to T get ASD	60%–80% of those with ASD → PTSD Rates of acute PTSD 23% (MVA) to 47% (rape) One-third remain symptomatic for >6 years	Overall rate 14% (average) exposed to T get PTSD, but only 30% of those with PTSD had prior ASD	
Response		No ASD		70% of those with PTSD had no prior ASD	
Response		No ASD		Delayed-onset PTSD From 0% to 68% ; average 38.2% military & 15.3% civilian (depends on definition)	
Response		ASD or no ASD		Other disorders: depression 16%, generalized anxiety disorder 11%, agoraphobia 10%, panic 6%, social phobia 7%	

*Note.* EEI = early EMDR intervention; T = trauma; TSS = traumatic stress symptoms; ASR = acute stress reaction (*ICD-10*); ASD = acute stress disorder (*DSM-IV*); PTSD = Posttraumatic stress disorder (*DSM-IV*); ERP = Emergency Response Protocol (Quinn, 2009); R-TEP = Recent Traumatic Episode Protocol (E. Shapiro & Laub, 2008); IGTP = Integrative Group Treatment Protocol (Jarero & Artigas, 2008). Statistical data from Peleg and Shalev (2006), Andrews et al., 2007, Bryant (2008), McFarlane (2008, 2009), and Roberts et al. (2009).

information is elicited. This material typically becomes the target of the next set of BLS. This alternating pattern of focusing on the memory followed by associative links is repeated until all disturbance is eliminated and the SUD score = 0. Then, in phase 5, a related positive self-referencing belief is integrated with the traumatic memory. Processing is completed when a body scan evidences no related somatic distress (phase 6). Appropriate steps are used to end each session (phase 7) and to reevaluate treatment progress at the beginning of the next session (phase 8). To ensure that all disturbance related to the old traumatic memory is eliminated, the standard protocol also involves addressing all current triggers and concerns about related future events.

### Recent Event Protocol

Trainings by the EMDR Institute have traditionally taught the approach to recent trauma as an extension of the usual protocol and have included it under the heading of "protocols and procedures for special

situations and populations." The recent event protocol was proposed by Francine Shapiro (1995) when she discovered that the standard EMDR protocol did not provide adequate generalization when working with victims soon after an earthquake. The recent event protocol conceptualizes the traumatic memory of the event as a fragmented experience that has not yet consolidated so that no single image can represent the entire event. It is therefore necessary to separately process a number of targets, which are aspects or parts of the event in order to facilitate integration and consolidation (F. Shapiro, 1995, 2001). The client is asked to give a narrative of the traumatic event, and the most disturbing aspect of the memory is chosen as the initial target. It is processed using the assessment, desensitization, and installation phases of the standard EMDR protocol. After the SUD rating for first target is reduced to an ecological level, the other targets that were identified from the narrative are then processed in chronological order. After the SUD

scores for each of these targets is similarly reduced to an ecological level, the client is asked to mentally visualize the entire sequence of the event to identify any remaining disturbing targets for processing. This is repeated until the entire event can be visualized from start to finish without disturbance.

This view about the fragmented nature of memories of recent traumatic events has been similarly stated in other approaches: “priming of a few representations in a fragmented memory will not necessarily activate all other representations in that memory. Therefore, satisfactory processing of a fragmented rape memory may require the repeated activation of each individual memory fragment” (Foa & Riggs, 1994, p. 142; see also van der Kolk, McFarlane, & van der Hart, 1996).

### EMD Protocol

In 2004, the *Military and Post-Disaster Response Manual* (F. Shapiro, 2004) reintroduced the EMD protocol for use in emergency situations, such as combat. The EMD protocol was the original protocol published by F. Shapiro in 1989 before it developed into EMDR in 1991. It differs from the standard EMDR protocol in that EMD returns frequently to the target, checking SUD level, without pursuing associative chains, and therefore is a more focused, contained method. This specialized application of EMD for early intervention was introduced because of the need for a circumscribed intervention in emergency situations of military and disaster response.

Whereas the recent event protocol and EMD are the forms of EEI developed by F. Shapiro, the EMDR literature proposes several additional EEI protocols.

### Emergency Room Treatments

The emergency response protocol (Quinn, 2009) is also outlined in the *Military and Post-Disaster Response Manual* (F. Shapiro, 2004). This procedure utilizes BLS together with grounding and positive cognitions assuring present safety, even hours after a critical incident, for those presenting with extreme responses and unable to communicate because of severe distress. The goal at this stage is limited to stabilization. Quinn (2009) has reported that this simple intervention using elements of EMDR can be effective in rapidly promoting calming and establishing communication in these circumstances.

Guedalia and Yoeli (2003) developed another protocol called EMDR-ER to be used in the emergency room. This protocol was used with patients who displayed difficulty in functioning, the goal being to get them up and out of the emergency room. The focus here was on installation of positive cognitions together

with BLS while the clinician assists in creating a narrative of the traumatic event so that the person had a “speech-full” coherent account with generally appropriate affect.

A variant of the EMDR protocol has been used by Kutz, Resnik, and Dekel (2008), who described it as a “single session modified abridged EMDR protocol,” which involves “asking the patient to focus on the most distressing sensory (picture, sound, smell) or bodily (pressure, suffocation, anxiety) experience, or cognitive preoccupations related to the traumatic event. Patients in the acute phase have little difficulty in doing so. In fact, what characterizes most of the subjects at this stage is the inability to be free of such distressing intrusions” (p. 193). Only associations that are related to the traumatic event are pursued with additional sets of BLS; otherwise, the patient is asked to return to the original target. It is usually provided in a hospital setting to patients with acute stress syndromes following terrorist attacks or motor vehicle accidents. Unlike the originators of other EEI protocols, Kutz et al. have collected systematic outcome data over a number of years that indicate very positive immediate effects in the majority of those treated, especially for intrusive symptoms.

### Recent Traumatic Episode Protocol

E. Shapiro and Laub (2008) have proposed a new comprehensive protocol called the Recent Traumatic Episode Protocol (R-TEP), which presents an integrative approach that incorporates and extends the main existing protocols together with additional measures for containment and safety. Adapting the eight phases for EEI, the R-TEP has introduced four key procedural concepts:

1. The Traumatic Episode (T-Episode): The original traumatic incident and its aftermath are viewed as an ongoing trauma continuum, called the Traumatic Episode, from the original incident until the present, comprised of multiple targets of disturbance that need to be integrated.
2. The Episode Narrative: During phases 1 and 2, only general information about the trauma is elicited, and the client is deliberately not asked to recount the details of the trauma to avoid triggering activation prematurely. The treatment phases commence with the Episode Narrative, which is telling the story of the T-Episode out loud, together with BLS. This is followed immediately with a Google search.
3. Google Search (G-Search): This is the metaphor used for a mechanism for identifying multiple targets of disturbance within the T-Episode. In this

way, the client is asked to perform a nonsequential (maybe the way the brain has stored the memories?) scanning of the T-Episode with BLS, without talking. When a disturbance is identified, this is used as a target for processing using the standard phase 3 assessment but with a modified phase 4 processing strategy.

4. Telescopic Processing: A further development of the R-TEP (E. Shapiro & Laub, 2009) introduces the notion of a “telescopic processing” strategy, for each target identified, which allows an expanding focus of association if needed. Association regulation is viewed as a continuum that has the EMD protocol strategy, with strict regulation of associative chains at one end and the EMDR standard protocol with no regulation of associative chains at the other end. An intermediate position between these is termed the EMDr (Kiessling, personal communication) strategy, which keeps the association chains within a current trauma focus. This gives an option for containing the scope of the processing without opening other clinical issues as in the usual EMDR protocol. “Telescopic processing” therefore is a staged approach with three strategies (EMD → EMDr → EMDR) adjusting the focus to the level at which the information processing is arrested, for minimal intervention. The G-Search and Telescopic processing are repeated until no more disturbance is identified in the T-Episode. Initial findings from Kunuk and colleagues (personal communication, 2009) indicate that on average about two to four targets will need to be processed.

## EMDR Group Protocol

Group EMDR protocols are seen as valuable in certain circumstances, such as mass disasters, where there are large numbers of victims and few clinicians, so that individual intervention is limited. The EMDR Integrative Group Treatment Protocol (Jarero, Artigas, & Hartung, 2006) was originally designed for working with children and was modified later for use with adults. It utilizes the butterfly hug as the form of self-BLS, together with drawings for brief (four sets of BLS) processing of trauma within a group setting. This obviously has limitations, as EMDR treatment is essentially an individual process, but it appears to be useful for reducing anxiety, strengthening coping resources, and screening for those who may require further individual attention. An adaptation of this protocol with the four-element exercise (E. Shapiro, 2007), together with group dynamic principles, has been developed (Laub & Bar-Sade, 2009).

## Application of EEI

Clinical observation and field studies indicate that EMDR can be beneficial for alleviating excessive distress and preventing complications in the weeks and months following critical events. “EMDR is a useful treatment intervention both in the immediate aftermath of disaster as well as later” (Silver, Rogers, Knipe, & Colelli, 2005, p. 29).

However, there seems to be uncertainty and some confusion among clinicians about which protocols to use for EEI and how and when to use them (see section on EMDR studies later in this article). It is noted that there are few published studies investigating specific EEI protocols to inform us here. There are very few conceptual constructs about EEI beyond the issue of unconsolidated memory. There is no clear policy about when to intervene after a trauma, and this has been left to “clinical judgment.” Some clinicians interpret this as “wait and see if symptoms persist” (unspecified time but usually weeks or months). Others are ready to intervene almost immediately within hours or days. There is a general expectation however that EMDR has much to contribute following disasters, as witnessed by the extensive EMDR humanitarian assistance programs worldwide with many volunteer EMDR practitioners providing trainings and treatment in the wake of disasters. It is therefore puzzling that the area of EEI has not been more clearly defined or researched.

Other issues that also need to be considered are the nature of the external situation (emergency or urgency, single incident or ongoing) and the possible requirement for extra stabilization and measures for containment and safety (for client and clinician). In addition, the nature of the therapy contract may have some important differences from usual practice. In the stressful circumstances often associated with EEI, while flexibility is necessary, the therapeutic context and goals should still be kept in mind. EMDR phases 1, 2, and 8 (history, preparation, and follow-up) could easily be overlooked. When a priority is given to recent trauma-focused intervention, informed consent should be provided at the outset concerning how to relate to other clinical issues that could arise during EMDR processing.

## Terms and Challenges of Early Psychological Intervention

Trauma therapy conducted within the first 3 months, while responses may still be diagnosed as “acute,” is generally considered to be an “early intervention”



(Roberts, Kitchiner, Kenardy, & Bisson, 2008; Roberts et al., 2009).

Current diagnostic definitions of traumatic stress symptoms are provided in the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text revision; *DSM-IV-TR*; American Psychiatric Association [APA], 2000) and the *International Classification of Diseases (ICD-10)*; World Health Organization [WHO], 2007). These include acute stress reaction (ASR) for a broad range of symptoms commonly appearing in the first 48 hours (*ICD-10*; WHO, 2007); acute combat reaction (ACR), an equivalent term used in military psychiatry for combat-related ASR (see Isserlin, Zerach, & Solomon, 2008); acute stress disorder (ASD), diagnosed when there are clinically significant arousal, reexperiencing, avoidance, and dissociation symptoms occurring from 2 days to 4 weeks (*DSM-IV*, APA, 2000); and acute PTSD, defined when these symptoms (excluding dissociation) persist beyond 4 weeks and up to 3 months. Chronic PTSD is diagnosed when these symptoms persist beyond 3 months. Finally, a diagnosis of delayed onset is made when PTSD develops only after 6 months.

There are calls for revising current definitions and diagnoses of ASD (Bryant, 2000). In addition, Isserlin et al. (2008) commented on the range of acute stress responses and questioned the relevance and distinctions between the diagnostic constructs of ASR, ASD, and ACR. They pointed out that whereas the ASR diagnosis recognizes the importance of reactions during the first 48 hours, the symptoms are not adequately delineated; the ASD diagnosis, by ignoring the first 48 hours, may fail to identify an important therapeutic window. They have recommended that, in the next *DSM*, these various diagnoses be replaced by one definition that spans the whole range of acute response to trauma. Finally, attention is drawn to the ASD criterion F (clinically significant distress interfering with functioning), which should be elaborated more, as decline in functioning possibly has a strong predictive potential to distinguish between pathological and nonpathological posttrauma responses.

### Challenge 1: If and When to Intervene

One of the dilemmas facing the EMDR clinician is whether to intervene with EMDR soon after a trauma since the early symptoms are likely to be transient and may be part of a normative adaptive response to a trauma. "The so-called normal response is highly variable. . . . Determining whether an individual is experiencing a problematic response or reaction that will spontaneously resolve after a traumatic event can be

difficult" (Bisson, Brayne, Ochberg, & Everly, P1017, 2007). It has been proposed that there are two distinct trajectory paths following trauma, one in which the symptoms reduce and disappear and another in which they increase and persist (Peleg & Shalev, 2006; Shalev, 1996). In particular, the role of persistent hyperarousal or dissociation in the development of PTSD has been noted (Peleg & Shalev, 2006; van der Kolk, 1996). However, there may also be other paths since PTSD and other disorders can also appear without prior ASD and with delayed onset (*DSM-IV*; Andrews, Brewin, Philpott, & Stewart, 2007; McFarlane, 2009; Solomon & Mikulincer, 2006). In addition, the presence of various dissociative phenomena related to trauma (van der Kolk, van der Hart, & Marmar, 1996) may obscure accurate assessment. This poses challenging questions about the necessity and timing of early therapeutic intervention when the symptoms are subclinical.

### Challenge 2: Risk for PTSD or Other Psychiatric Disorders

Current efforts to identify and direct interventions to those who are most at risk for developing psychological problems encounter various difficulties. For many years, ASD was regarded as a primary marker for risk of developing PTSD. Recent evidence indicates that whereas a majority of people who have ASD go on to be diagnosed with PTSD, the majority of people who develop PTSD did *not* initially have ASD (Bryant, 2006, 2008; McFarlane, 2008; Roberts et al., 2009). Therefore, the presence of ASD, while significant, is of limited value for identifying many of the people who eventually have PTSD or other disorders.

In a recent large review, delayed onset of PTSD was found to occur as high as in 68% of cases, although on average in 38.2% of military and 15.3% of civilian cases of PTSD, when defined allowing for prior subclinical symptoms (Andrews et al. 2007). Traumatic stress in general is considered an important risk factor for all psychopathology (McFarlane, 2008, 2009; van der Kolk, 1996). In addition, PTSD is only one of a number of psychiatric problems that can occur after trauma, although little is known about markers or effects of early interventions for other psychiatric disorders (Bryant, 2008). Accumulation of traumas and the possible role of trauma memories over time has been proposed as another risk factor due to a process of sensitization and "kindling" (McFarlane, 2008, 2009). Additionally, life events and other negative experiences, such as divorce, job loss, failure, and so on (called "small t" traumas in EMDR), can also be

risk factors although not defined as trauma by *DSM* (Cvetek, 2008; McFarlane, 2007).

## Research

### Controlled Studies

As mentioned previously, there are no controlled studies of the effectiveness of EEI or of any of the EEI protocols to date. In the Systematic Review and Meta-Analysis of Multiple-Session Early Interventions Following Traumatic Events (Roberts et al., 2009), 14 of the 25 controlled studies that met their review criteria involved forms of cognitive-behavioral therapy (CBT); the remainder were forms of psychosocial interventions aimed at preventing PTSD. It is regrettable that EMDR does not appear at all.

The findings were encouraging but mixed. They showed that when there was a diagnosis of ASD or acute PTSD, trauma-focused CBT was effective in reducing and preventing traumatic stress symptoms, but it was less effective with heterogeneous populations exposed to trauma. Referring to who could benefit from trauma-focused CBT, Roberts et al. (2009) point out that “when planning how best to detect such individuals, it is important to heed the research suggesting that merely screening for acute stress disorder is problematic as it misses many individuals who go on to develop PTSD” (p. 7).

Other implications for practice from these results included being unable to recommend (yet) any psychological intervention for routine use after trauma. No evidence was found for any harm resulting from an intervention. However, EMDR clinicians and researchers should note the recommendation by the authors for the “development and trialing of other psychological treatments.” The authors also advised that future research should “consider adverse events and tolerability of treatment, careful control of additional treatment, and explore the optimal time to intervention, how long treatment should last, and whether other techniques can be incorporated into existing treatments to improve their efficacy” (Roberts et al., 2009, p. 7).

A recent large study in Jerusalem (Shalev, submitted for publication) provided 12 weekly sessions to participants diagnosed with ASD to compare the effectiveness of cognitive therapy, prolonged exposure (PE), medication (SSRI, escitalopran), placebo, and wait-list controls. They reported that at 5 months follow-up, only 18.2% of those treated with cognitive therapy or 21.4% treated with PE met diagnostic criteria for PTSD, compared to 57.4% of the wait-list, 61.9% of the medication, and 58.8% of the placebo groups (report by Busko, 2007).

While this study suggests that effective treatment can reduce the risk of developing PTSD among those diagnosed with ASD, it also illustrates another problem encountered with EPI research. The representativeness of the sample in this and possibly other studies may be queried because of the large percentage of people who declined to participate in the study although they were eligible.

Almost half (49%) of symptomatic trauma survivors declined a clinical assessment, and of those survivors who were assessed by clinicians and then invited to treatment, 27% declined early treatment. The researchers viewed this resistance to treatment as a barrier to care. This may be related to avoidance as part of the symptom syndrome of ASD and PTSD as well as a reflection of dysfunction, which may include a difficulty to enlist support and seek treatment. However, it is also possible that some of these treatment decliners recognized that they did not need therapy and that they experienced a natural recovery from ASD. Future research should track the course of symptoms in those who decline early psychological intervention.

### EMDR Studies

While EMDR is a prominent therapeutic intervention for posttrauma, there are surprisingly few publications addressing EEI even considering the difficulties involved with conducting research in disaster situations (see Maxfield, 2008). Among the few published studies, there have been some promising results.

Victims of Hurricane Andrew who were given a single session of standard EMDR two and a half months following the disaster showed greater improvement than the wait-list controls (Grainger, Levin, Allen-Byrd, Doctor, & Lee, 1997). Following the 9/11 terrorist attacks, Silver et al. (2005) compared the presenting symptoms of participants who sought early treatment (2–10 weeks following the attack) to those who sought treatment at a later date. They found that the later group presented with higher levels of initial distress. All participants were provided with four or five EMDR sessions, and the results showed significant positive gains. In this study, although both the recent events protocol and the standard protocol were used, the researchers did not differentiate between the treatments and did not document which treatment was provided to specific patients.

This lack of awareness about attending to the type of the EMDR intervention and the use of specialized protocols for EEI is found similarly in other studies. An exception is Colelli and Patterson (2008), who

presented three cases in which the protocol for recent events was used following 9/11. However, in only one of the cases was it used within less than 3 months post-9/11. Interestingly it was also found to be effective after 9 and 12 months, as the authors suggested that the memories were not yet consolidated.

An unpublished pilot study that employed the EMD protocol was conducted by Ilan Kutz in collaboration with the EMDR-Israel Association. A sample of people who had been admitted to emergency rooms at two hospitals suffering from severe posttraumatic symptoms after missile attacks during the 2006 Lebanon war were contacted by phone. Those who still had symptoms several weeks later were offered a single session of EMD treatment and follow-up. The results were inconclusive in part because the sample was small (27) and all participants had been exposed to repeated shelling and multiple traumatic events for more than 4 weeks, but it seems that the treatment was helpful in the short term (82% reported initial improvement) on a number of measures, although there was some erosion of gains at a 5-month follow-up (E. Shapiro & Laub, 2008).

A study in progress, following the bombings in Istanbul in July 2008, conducted by Emre Konuk and his colleagues, is the first to use the R-TEP with careful measures. Their initial findings are encouraging. In the terrorist bombing, 17 people died, and more than 150 people were injured. Ten psychologists from the Istanbul Metropole Municipality were sent to treat the victims. All the measurements were taken before and after each session for the Impact of Event Scale and Foa's PTSD Symptom Checklist and before the first and the last session for the SCL-90. The R-TEP procedure was applied to 23 of the 32 adult participants. They received an average of three 120-minute R-TEP sessions. It was sufficient to process only two or three targets of the traumatic episode using the trauma-focused EMD and EMDr strategies, and there was no need to "telescope" to the standard EMDR protocol. The scores on the Impact of Event Scale decreased dramatically right after the first session and showed further improvement after subsequent sessions. Scores on the PTSD Symptom Checklist also decreased. The positive effect was maintained at 3- and 6-month follow-ups (Konuk, & Yuksek, 2009 personal communication).

A few case studies have been published indicating the successful treatment of adults with acute PTSD using EMDR (survivors of a Japanese earthquake [Ichii, 1997], and a Tsunami survivor [Fernandez, 2008]) and with child victims of an earthquake in Italy (Fernandez, 2007). Fernandez described working

with these survivors at 2 months and 1 month after the trauma, respectively. In both studies, she used the standard EMDR protocols. The Tsunami survivor showed a rapid reduction in PTSD symptoms. However, the child earthquake victims required follow-up treatments at 3 months and 1 year. The possibility of utilizing the recent event protocol appears not to have been considered or discussed.

Two promising applications of EEI with specialized protocols among military personnel have been published. Russell (2006) successfully achieved the goal of reducing acute symptoms using a modified protocol similar to EMD following acute combat reaction of four U.S. soldiers (earliest was 2 weeks). Wesson and Gould (2009) used the EMDR recent event protocol 2 weeks after an acute combat reaction with a U.K. soldier on 4 consecutive days that enabled him to resume functioning. Taking careful measurements, they were able to confirm the gains posttreatment and at an 18-month follow-up.

For further details on the subject, see the 2008 special issue of the *Journal of EMDR Practice and Research* on the EMDR treatment of recent events and community disasters.

## Discussion

Conducting research in the stressful circumstances following trauma is not easy. This is compounded because obtaining meaningful evidence about the efficacy of early interventions is difficult because of the high rate of spontaneous recovery. Nevertheless, the field of EPI in general is being increasingly explored, while EEI remains relatively uncharted. Pioneering findings are encouraging but raise questions. By looking for the key to PTSD prevention under the "light" of ASD, EPI has provided promising results within this group; however, it appears that they are missing a much larger number of people at risk for PTSD and other disorders.

### Why Early Intervention?

There is uncertainty about providing treatment when the symptoms are insufficient for a diagnosis of ASD or acute PTSD. However, a decision to intervene therapeutically to reduce pain and suffering, when requested, is justifiable. Data collected by Kutz et al. (2008) over a number of years has shown that single-session modified EMDR can be used effectively in the days and weeks following a critical event, especially for rapid reduction of intrusive symptoms. The findings that most of the people who end up with PTSD did not exhibit prior ASD and that most of the

disorders following trauma are not necessarily PTSD are troubling, particularly as the markers for these other disorders are largely unknown. This may in part be a function of how we define ASD or relate to sub-clinical symptoms. There is some indication that delayed onset of PTSD may result from reactivation of earlier sub-clinical symptoms (Andrews et al., 2007).

Traumatic memories and trauma preoccupation are recognized risk factors for various disorders, and this is fully compatible with the adaptive information-processing (AIP) model. Attention is drawn to McFarland's (2007, 2008, 2009) work that suggests that accumulated traumatic memories can be a factor in sensitizing later disorders, which increases with the number of exposures. The mnemonic model of PTSD also hypothesizes that it is the current memory of the event and not the event itself that determines the symptoms and proposes this as an alternative to the current event-based etiology definition of the *DSM-IV* (Rubin, Bernstein, & Bohni, 2008). Corroborative evidence comes from studies of traumatic brain injury that conclude that the majority of patients who lacked memory of the event did not develop PTSD (Klein, Caspi, & Gil, 2003).

### A Unique Role for Early EMDR Intervention

If multiple traumas are predictors of poorer response and if traumatic memories tend to accumulate, then EMDR may offer a key prophylactic role with early intervention as a relatively brief treatment specializing in the adaptive processing of trauma memories. An advantage of EEI may lie in that it could be conducted simply over several consecutive days.

The AIP model predicts that dysfunctionally stored memories underlie many current psychological disorders (F. Shapiro, 1995, 2001; Solomon & Shapiro, 2008). Consequently, it is anticipated that before these memories have become maladaptively consolidated into negative theme clusters, EEI could prevent sensitization or accumulation of negative associative links and would promote mental health and resilience. The assumption that a recent traumatic memory lacks consolidation is a disadvantage that can be turned to an advantage. This could be seen as a good time to check that adaptive processing is occurring. The "cut finger" will heal itself better if it does not get infected. This may be a unique contribution of EEI to "keep the wound clean." Before consolidation of the memory has taken place, it may be able to facilitate adaptive integration (e.g., process "sticking" points), promote positive coping (especially if this is not occurring spontaneously),

contribute to the development of resilience (especially in ongoing trauma), and reduce suffering and later complications.

Another advantage of early intervention is that it may preempt the development of avoidance and dysfunctional withdrawal from seeking treatment that tends to increasingly develop later on (McFarlane, 2008; Peleg & Shalev, 2006).

It is hypothesized that EEI can facilitate adaptive processing and may remove obstacles to release spontaneous processing. It can be used to treat distress and also prevent complications by checking for subclinical sticking points that can obstruct AIP and do not necessarily show up on the DSM radar.

### Conclusions

The field of EPI has made some promising progress by demonstrating that it can prevent the development of chronic PTSD among populations diagnosed with ASD or acute PTSD. It has, however, been unable to show effectiveness with heterogeneous populations exposed to trauma. EMDR has been left behind in this endeavor because of a lack of research or systematic field studies. It is suggested that the lack of research about EEI has occurred in part because this area has not developed sufficient awareness, clarity, and definition. The field of EEI requires establishing a more comprehensive approach with distinctive strategies and a body of knowledge to promote this interest and awareness among EMDR practitioners and to generate research.

### Further Research

A first task is to collect empirical evidence for the various EEI protocols to begin comparing their relative effectiveness so that recommendations can be made about which protocols to use and when. EMDR clinicians and researchers are urged to document carefully which EEI protocols they use when they intervene early (within 3 months of a trauma and possibly later when there appears to be lack of memory consolidation).

As a matter of routine, it is recommended to collect basic data and use at least simple measures such as the Impact of Events Scale.

It is most important to initiate randomized controlled trials. Many of the CBT studies were conducted with motor vehicle accident victims, as this is a relatively accessible population. It may even be possible initially to collaborate with ongoing CBT studies so that EEI could be suggested as a comparison control group condition.



Obtaining evidence for the effectiveness of preventive EEI intervention for heterogeneous populations exposed to trauma is more difficult and would probably require large sample longitudinal studies with long-term follow-ups.

We can get some idea of how the field of EPI is developing at the present by examining the criteria and findings for the studies to be included in the Cochrane Review of Early Psychological Interventions (Roberts et al., 2008). It relates to studies that began within the first 3 months after a trauma with the primary aim of preventing PTSD or treating ongoing distress for participants with symptoms of traumatic stress, with acute stress disorder, or with specific risk factors. The Cochrane Review groups interventions according to number of treatment sessions (2–6 vs. >7), time after trauma (<1 month vs. 1–3 months), type of traumatic event (combat vs. rape/sexual assault vs. other civilian trauma), participant characteristics (male vs. female), and symptom severity (mild/moderate vs. severe).

The recommended primary outcome measure for prevention is the rate of PTSD among those exposed; the recommended primary outcome measure for treatment is the severity of traumatic stress symptoms evaluated with standardized measures such as the Clinician Administered PTSD Scale (Blake, 1995).

Recommended secondary outcome measures are reliable and valid self-report measures for traumatic stress symptoms, depression, and anxiety. For details and references for the recommended measures see Roberts et al., 2008. It is also advised to note dropouts, adverse effects, and general functioning, including quality-of-life measures.

## A Stitch in Time

EMDR has an acute awareness of the significance of traumatic memories in the etiology of psychological disturbance. Much of the work of EMDR clinicians involves undoing the damage done from dysfunctionally stored memories of long-standing traumas. A trauma memory and its aftermath is viewed as a period of high vulnerability. It might be worth investing more attention to the therapeutic window of opportunity afforded by EEI following recent trauma. It could be more rewarding to prevent the dysfunction rather than attempting to repair it later.

Traumatic stress and traumatic memories are like a virus that threatens the well-being of the organism. The system can ordinarily cope with most of these. EEI can have a special role in promoting mental hygiene by strengthening the coping or “immune” system and resistance in the future. In the real world,

it will not be practical or possible to offer the EEI “antivirus” to all those who could benefit. Nevertheless, it is important to monitor and identify individuals or circumstances with higher risk as part of an overall awareness of the option of EEI.

## Summary

EMDR is perceived as a treatment highly suited to treating psychological disturbance following trauma and has demonstrated effectiveness in treating chronic PTSD and dysfunctionally stored old trauma memories. Yet EEI within 3 months of a trauma has not received much attention from EMDR researchers or clinicians. The lack of research about EEI has occurred in part because this area has not developed sufficient awareness, clarity, and definition among EMDR clinicians. Specialized EEI protocols, necessary because of unconsolidated trauma memories, are taught at trainings but apparently are not in common use or reported in publications.

The field of EEI has emergent evidence that intervention (so far only with CBT) during the first 3 months following trauma can effectively reduce the incidence of chronic PTSD among populations diagnosed with ASD or acute PTSD. However, there have been no controlled studies of EEI.

Whereas a majority of those diagnosed with ASD will go on to develop PTSD, only a minority of all those who eventually are diagnosed with PTSD had antecedent ASD. There are also many other disorders that can develop posttrauma apart from PTSD. Therefore, by treating only those diagnosed with ASD, many persons exposed to trauma who will eventually develop PTSD and/or other disorders are missed.

The AIP model predicts that dysfunctionally stored trauma memories underlie many current psychological disorders. There is also evidence that accumulated traumatic memories may be a possible factor in sensitizing later disorders, increasing with the number of exposures. Therefore, EEI, before these memories have become maladaptively consolidated, in addition to treating distress, could also have a unique role in preventing sensitization or accumulation of trauma memories and negative associative links.

A call is made for a more comprehensive approach to the field of EEI with distinctive strategies and body of knowledge to promote interest and awareness among EMDR practitioners and to generate research. “A stitch in time,” EEI, while the trauma memory is still consolidating, may prove to become the most important and rewarding time to intervene.

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