Building Resilience and Dismantling Fear: EMDR Group Protocol With Children in an Area of Ongoing Trauma

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A number of studies indicate that EMDR (eye movement desensitization and reprocessing) may be efficacious in treatment of children and young people with symptoms of posttraumatic stress. However, reports are limited in the use of the EMDR psychotherapy approach in situations of ongoing violence and trauma. This case study describes work with seven children in an area of ongoing violence who were subject to repeat traumas during the course of an EMDR psychotherapy intervention, using a group protocol. Results indicate that the EMDR approach can be effective in a group setting, and in an acute situation, both in reducing symptoms of posttraumatic and peritraumatic stress and in "inoculation" or building resilience in a setting of ongoing conflict and trauma. Given the need for such applications, further research is recommended regarding EMDR's ability to increase personal resources in such settings.

Keywords: EMDR; conflict; trauma; treatment; resilience; group therapy

Eye movement desensitization and reprocessing (EMDR; Shapiro, 1995, 2001) is a well-established and well-researched psychotherapy approach that has been recognized in national and international guidelines as an effective treatment for posttraumatic stress disorder (PTSD) in adults (e.g., American Psychiatric Association, 2004; Chemtob, Tolin, van der Kolk, & Pitman, 2000; CREST, 2003; National Institute for Clinical Excellence, 2005; U.S. Department of Veterans Affairs and Department of Defense, 2004).

There is a substantial body of research evidence that underpins these recommendations and, reviewing the literature on the efficacy of EMDR, Maxfield (2007) and Spector (2007), for example, concluded that EMDR is both effective and efficient in the treatment of PTSD in adults. A recent meta-analysis (Bisson et al., 2007) also concluded that EMDR and trauma-focused cognitive behavioral therapy were effective in the treatment of PTSD, and there was some evidence to suggest that they were superior to other therapies that showed a positive effect, namely stress management and group cognitive behavioral therapy (CBT).

EMDR With Children

Research on EMDR with children is promising but less well established. The research findings provide preliminary evidence that EMDR may be efficacious in the treatment of children and young people with symptoms of posttraumatic stress (Adler-Tapia & Settle, in press).

There is also evidence that EMDR may have an effect on future behavior. Jaberghaderi, Greenwald, Rubin, Zand, and Dolatabadi (2004), for example, in a randomized controlled trial compared EMDR with CBT in the treatment of 14 Iranian girls between ages 12–13 years who had been sexually abused. Their findings suggest that both CBT and EMDR can be effective, and EMDR more efficient—requiring fewer sessions—in enabling recovery from the psychological effects

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of sexual abuse, as indicated by self-report, parent-report, and teacher-report scales. The study also found significant improvement in behavior as measured by the Rutter Teacher Scale (Rutter, 1967), which includes the rating of problematic behaviors such as hyperactivity, antisocial behaviors, and relational problems.

Chemtob, Nakashima, and Carlson (2002) also noted some behavioral change following EMDR in children with PTSD 3.5 years after Hurricane Iniki, in the United States. In a randomized controlled trial of children with a diagnosis of PTSD at a 1-year follow-up of a previous counseling intervention, Chemtob et al. (2002) found that, after EMDR, children showed a substantial decrease on the Child Reaction Index (Pynoos, Frederick, & Nader, 1987), a semistructured interview for assessing posttrauma symptoms, and on self-report measures of anxiety and depression. They also made fewer health visits to the school nurse and had improved scores on a negative self-esteem subscale, both of which might be associated with a decreased sense of vulnerability and the development of personal resources, including resilience.

There is limited evidence of the effectiveness of early psychological intervention with children following trauma. Stallard et al. (2006), for example, in a randomized controlled trial examining the effects of early psychological debriefing on children involved in a road traffic accident, found that early psychological intervention together with structured assessment did not result in any additional gains on self-report measures of psychological distress when compared with structured assessment alone.

Following the attacks on the World Trade Center on September 11, 2001, Silver, Rogers, Knipe, and Colleli (2005) reported a study of a time-limited psychological relief program using EMDR as an early intervention with children, adolescents, and adults whose age range was 6–65 years. They found EMDR to be a useful treatment both in the immediate aftermath of disaster as well as later but also noted that the longer that treatment was delayed, the more severe was the level of disturbance experienced by the clients.

Similarly, Jarero, Artigas, and Hartung (2006) reported promising results for an EMDR group treatment protocol used in an early response to children between the ages of 8–15 years who had lost their homes, and in some cases loved ones, in the 2004 flood in Piedras Negras, Mexico. This study is referred to in more detail below.

There is, however, no evidence of the effectiveness of EMDR in children with acute stress disorder in situations of ongoing conflict or war, and there is only indirect evidence, as noted above, of the effectiveness of EMDR in enabling children to develop resilience, or "inoculation" to trauma, in situations such as war or ongoing conflict.

Resilience and Adaptive Information Processing

Although resilience is a growing area of interest in the field of trauma (Harvey, 2007), there is very little research on resilience as an outcome of psychological therapy. In a study of adults with PTSD, Davidson et al. (2005) found that a combination of psychotropic medication and CBT was associated with improvement in resilience as measured by a self-report scale. The greatest changes were associated with confidence, control, coping, adaptability, and knowing where to turn for help.

A literature review found no studies examining resilience as an outcome of therapy in children. The role of psychological therapy in relation to resilience needs to be explored more fully (Alayarian, 2007; Kaminsky, McCabe, Langlieb, & Everly, 2007), as does the possible impact of EMDR on the development of resilience in traumatized people.

The Concept of Resilience

Fraser (cited in McAdam-Crisp, 2006, p. 461) described resilience as "an individual's ability to 'bounce back' or return to a normal state following adversity." Harvey (in press) referred to resilience being evident "when an event has little or no deleterious impact" (p. 7). Resilience has been conceptualized as a personality trait and has typically been linked with vulnerability and examined in terms of risk factors associated with the etiology of posttraumatic stress, including acute stress disorder and PTSD (McFarlane & Yehuda, 1996). For example, resilience was determined to be a factor predicting psychological adjustment in Palestinian children after political violence (Punamäki, Qouta, & El Sarraj, 2001).

Resilience and the Adaptive Information Processing Model

If resilience is an adaptive response to situations of trauma, Shapiro's (2001) Adaptive Information Processing (AIP) model may help understand possible mechanisms for developing resilience. This model posits that memory networks are the basis of perception, attitudes, and behavior, and that disturbing events are the primary basis for pathology. According to the model, information (memory of experiences)

is usually processed by the neurobiological system to an adaptive resolution. The information becomes integrated with other memories and is accessible as a memory of a past event.

However, some traumatic experiences become stored in memory in a way that blocks the processing to adaptive resolution and are experienced in the present with the thoughts, images, cognitions, emotions, and sensations that were experienced in the past and associated with the disturbing event. Processing the memory of disturbing events is a function of EMDR that allows appropriate connections to be made to adaptive networks. With the integration of the memory of the disturbing event(s) into the full range of memory, there are associated shifts in symptoms, personal characteristics, and the sense of self (Shapiro, 2001, 2006).

If this is so, then effective treatment with EMDR should give the individual access to a wider range of memory, experience, and personal resources, and, therefore, the potential for resilience in situations of repeated trauma, where previously the person may have been vulnerable to psychological difficulties.

The model leads to the hypothesis that EMDR could help a person change patterns of response and enable a person to develop resilience in an ongoing situation such as war or armed violence, perhaps by integrating experiences into semantic, accessible memory, thereby making it possible to make a considered response and informed choices.

EMDR Psychotherapy Approach in Groups

While EMDR is primarily an individual psychotherapy approach, it has also been used in groups. Jarero, Artigas, López Cano, Mauer, and Alcalá (1999) developed an EMDR-integrated group treatment protocol (EMDR-IGTP) for children following the Hurricane Pauline disaster on the west coast of Mexico in 1997 and later developed it for use with children and young adults. The EMDR-IGPT was effective in alleviating symptoms of posttraumatic stress, as measured by the Child's Reaction to Traumatic Events Scale (Jones, Fletcher, & Ribbe, 2002) and a modified Subjective Units of Disturbance Scale (SUDS; Wolpe, 1958), which is used as part of the standard EMDR protocol (Jarero, Artigas, & Montero, this issue; Jarero et al., 2006).

Jarero and colleagues (2006) found that the hybrid of EMDR and group work "took treatment efficacy and efficiency well beyond that expected from [the] traditional group process" (p. 121), and it was possible to reach a larger number of people than it would have been with 1:1 therapy.

The EMDR-IGPT was based on the EMDR standard eight-phase protocol but used the "Butterfly Hug" as bilateral stimulation in place of the more usual eye movements. The Butterfly Hug was developed by Artigas, Jarero, Mauer, López Cano, and Alcalá (2000) for use with children but has been extended to work with adults. In the Butterfly Hug, the person is asked to cross his/her arms across the chest and tap alternately with each hand on the contralateral shoulder, upper arm, or chest area.

An adaptation of the Butterfly Hug protocol was used in a group setting with Kosovar-Albanian refugee children in Germany (Wilson, Tinker, Hofmann, Becker, & Kleiner, 2000) and with children who witnessed the Milan air crash in Italy (Fernandez, Gallinari, & Lorenzetti, 2004).

Largely, this development of the EMDR approach in groups has been a response to the practicalities of providing a therapeutic service in settings in which the numbers of people needing treatment have made individual work impracticable. A common factor has been that the traumatic incident or incidents have affected communities or groups of people and families who have experienced a similar or shared traumatic event or events, such as a natural or human-made disaster, war, or conflict.

This was the case in the present study. The community experienced ongoing conflict but the children in the clinical study were from a group of families sharing adjacent accommodation in a refugee camp, and the children were affected together by the same incidents. The children were seen as a group, therefore, not because they were large in number, but because they had been involved in the same incident. It was thought that being together as a group would encourage them to work with difficult material and that sharing the same therapeutic approach and the same experiences could be helpful. It was also thought that being together would increase their sense of support and safety.

Present Study

The present report describes clinical work with seven Palestinian children between the ages of 8 and 12 from the Aida Refugee Camp, which is located at the northern entrance to the city of Bethlehem and close to the wall that separates Bethlehem from Jerusalem. Their living accommodation was opposite the "separation" wall guarded by military personnel from a watchtower and was built within a few meters of their home.

The children, three girls and four boys, ranged in age from 8–12 years and were referred by their parents

for psychological therapy 5 days after a shooting. The parents said that while playing on a balcony of their building the children were exposed to shooting by military forces who were in the watchtower. Four of the children were harmed by shrapnel. Another child, not included in this study, was shot in his belly and taken to a hospital. He received individual EMDR later after being discharged from the hospital.

Five days after the incident, the seven children were referred for psychological help with the following symptoms: physical illness and high temperature; hyperactivity; nightmares; sleeping difficulties, including an inability to sleep and a fear of sleeping in their bedrooms; anxiety and worry; unwillingness to stay in a single place; severe grief reactions; inability to deal with discipline; difficulties in concentration. Because this was an acute response to a traumatic situation, indicators of severity of symptoms and outcome of treatment were limited to clinical observation and report, a visual analog version of the SUD Scale (Wolpe, 1958), and the self-reports of the parents and children.

The seven children were seen as a group for four sessions plus one follow-up session by two therapists using the group treatment protocol described below. The treatment was set in the context of an ongoing psychosocial program for children and families. These families were already known to the service, and the histories were given by the parents and children.

Group Treatment Protocol

The EMDR group approach used here was based on the "Butterfly Hug" protocol used by Wilson et al. (2000). Unlike the eight phases of the standard EMDR protocol (History, Preparation, Assessment, Desensitization, Installation, Body Scan, Closure, and Re-Evaluation), the approach described here does not include explicit elicitation of negative and positive cognitions and does not include a Validity of Cognition rating scale or a body scan.

The phases of the group protocol described here comprise: History; Preparation and Assessment; Reprocessing (including Desensitization and Installation and/or Closure); Re-Evaluation. These are described in more detail below. In this program, the reprocessing sessions were preceded and followed by time in a play area in which the children had ready access to toys and other materials. Each session was one-and-a-half to two hours, of which the reprocessing was half an hour to an hour.

History

History was taken from the children and their parents.

Preparation and Assessment

During the preparation phase, children were given an explanation of what was going to happen and then asked to "Think about a safe place or pleasant place or a pleasant or safe moment."

In this setting of ongoing conflict, a lot of time needed to be given to enabling the children to identify a safe, special, or pleasant place. Some participants needed to think of a pleasant dream or a moment from a picture on television or in a magazine where they would feel safe or happy, as they were unable to identify anywhere in reality.

After imagining a safe, special, or pleasant place, the children were asked to "draw a picture of the pleasant place. Look at the drawing, to let yourself feel the same sense of relaxation or of feeling pleasant."

The children, having been shown how to do the Butterfly Hug, were asked to "do the Butterfly Hug and notice what kind of feelings you have."

The children were then asked to rate how they felt using a pictorial form of the adapted semantic differential SUD Scale in which "no disturbance or neutral" was represented by a happy "smiley face" and "the highest disturbance you can imagine" was represented by a sad "smiley face." The children were asked to "point at how you feel at this moment, and make a mark on the scale."

Reprocessing

The children were asked how they felt now. When they felt "OK" and ready to do something else, they were asked to think about the incident and the worst part of the memory: "Think of the incident that happened; go back to what happened [when you were playing on the balcony]. Draw the worst part of that incident."

Using the visual analog of the SUD Scale, the children were asked to "show how disturbed you are now when you look at the picture and think of the incident. And mark the scale."

Having done so, the children were asked to "do the Butterfly Hug. Let whatever happens, happen. If the picture changes, draw it. Whatever it is changed to, draw it." There were no "messages" that the picture should be better—"whatever it changes to, draw it."

Having drawn the picture, the child was asked to "look at the [new] picture and rate how disturbed you feel now." Then to "do the Butterfly Hug until the picture in your mind changes." The process was repeated usually about four times, sometimes five.

Closure

At the end of the reprocessing, or at an appropriate time during incomplete reprocessing, the child was asked to "think again of the safe or pleasant place; notice your feelings and slowly do the Butterfly Hug until the feelings get stronger. Then rate the level of feeling on the 0–10 scale."

At the end of the sessions, the children were given more time to spend in the play area.

Re-Evaluation

At the beginning of the next session, the children were given time in the play area and the opportunity to talk about their experiences. They were then asked to draw the safe place.

The children were then asked to go back to the memory of the original incident, draw what came to mind, and rate it on the visual analog scale. The process described above was repeated for the reprocessing and closure.

The 4 sessions were conducted at intervals of 2 days (between sessions 1 and 2), 2 days (between sessions 2 and 3), and 2 weeks (between sessions 3 and 4). The fifth follow-up session was conducted between 4 and 5 months after the fourth consultation.

Clinical Change

Sessions 1 and 2

In the first session there was a reduction in SUD ratings for each child, changing from SUDs of 8–10 to 0–5. With the second session there was a further reduction in SUD ratings within the 0–5 range. Some missing data prevent a full reporting of the results. The therapists noted that the process was tiring for the children and took a lot of emotional energy, but it was clear from the scales that degree of disturbance ratings improved. There were also changes in the drawings, which began to show "good things, happy things."

Second Incident

Between sessions 2 and 3, the children were exposed to another traumatizing incident. The parents said that their homes had been invaded by a unit of the military forces wearing black face masks. Furniture in the accommodation was damaged and the children were separated from their parents, held together in a room, and prohibited from moving, including using the bathroom.

Having been told of the incident, the therapists were concerned that when the children returned for the third session they would have deteriorated and would show symptoms at a level similar to those before the first session. It had been the therapists' experience over many years of working with children exposed to ongoing incidents that benefits accrued during therapy were not sustained after further traumatization.

Session 3

In this case, however, despite the fact that the children were willing to talk about the incident, what was unusual was that the children did not show severe symptoms following exposure to further trauma, and their presentation had not reverted to the levels of severity found in the first session. Their account of the incident was like a narrative memory and not like an intrusive experience.

When asked if they wanted to draw the incident, most of the children drew the new incident in a single drawing and rated the severity of disturbance in relation to the incident. But then they carried on with re-evaluation and reprocessing of memories of the original target incident. The SUD ratings of the target incident were at the same point at which they had stopped in the previous session, prior to the second incident.

Some of the children did not draw the new incident but talked about it and then continued with re-evaluation and reprocessing of the original memory. The therapists reported feeling "astonished" at the children's positive responses.

Session 4

This series of consultations with the children ended with the fourth session. Again, the SUD scores were in the range of 0–1, and the parents said their children's symptoms had disappeared and that they had gone back to living normal lives.

Results at Follow-Up

A follow-up consultation (session 5) 4 to 5 months after closure confirmed that the children continued to live normal lives in spite of ongoing traumatic incidents. The children did not show symptoms of posttraumatic stress that they had prior to EMDR, even though, for example, a new guard tower had been built, giving the military full control of the area with the ability to shoot directly into the residences of the refugee camp and the children's home.

Therapist Observations

The therapists engaged in this clinical work noted, "We found the children were getting better, and after the soldiers invaded the house, they [the children] weren't bad [symptomatic]. They had resilience and at the end they were fine." The therapists noted, "They are more happy. You can see it in their faces."

Observation of children in the play area showed that the nature of play had become more cooperative and less aggressive, both in interpersonal interactions and in the choice of play materials. This was consistent with the other reports of change. Before the first session, the children had been hyperactive in the play area; they showed signs of aggression, playing "in a tough way" and as separate individuals. They used toys such as guns, tanks, and diggers.

After EMDR, they engaged in more group activities. Play was more interactive and cooperative, and there were times when the whole group played together. At follow-up, the therapists noted that none of the symptoms of posttraumatic stress had returned and none of the children had developed posttraumatic stress disorder.

Self-Reports

The SUD ratings for all the children moved from initial ratings between 8–10 to final ratings between 0–1. Self-reports of the children included statements that they were feeling better. Some of the children asked if they could bring relatives and friends so that they could feel better too. Changes in the drawings included drawings of the future when there would be play, cooperation, and the wall would be dismantled.

Parents' Reports

Parents reported changes in the children. For example, some of them said that when the children came back from sessions, they could see that they were getting better. Parents said that the children no longer had the original symptoms and that they were happy. They were less afraid. They were able to concentrate at school, and their achievements in school were back to the levels they were at before the incidents. Parents said that their children were less aggressive, for example with toys, and that they showed more discipline.

Intrusion and avoidance are characteristic of acute stress disorder and PTSD. Parents referred to some specific changes that may be associated with attachment and avoidance. They included noticing that the children were less "clingy," less fearful, and less isolated. They wanted to go to school and to go out, whereas before the sessions they wanted to avoid school and avoid going out. There was less attachment to the parents.

Some parents said that prior to the treatment sessions, the children had talked repetitively "in a feared way" about the initial incident and were preoccupied with it. Since the sessions, the children had talked about it less frequently and as an event in the past rather than as an intrusive experience in the present. The parents said that the children no longer had disturbed sleep or nightmares.

Discussion

This report is an account of a therapeutic intervention in a clinical setting where children were exposed to ongoing trauma. Although this is a case report of a small group of seven children, it lends support to the view that an EMDR group protocol can be used effectively with children in a situation of ongoing conflict and violence by reducing symptoms of posttraumatic stress. It also supports the view that EMDR can be used as an early intervention in the acute phase of posttraumatic responses. Additionally, the findings suggest the possibility that EMDR may be effective in enabling children to develop resilience to further trauma.

This finding is consistent with the hypothesis that follows from the AIP model, namely that adaptive resolution should lead to shifts in symptoms, personal characteristics, and the sense of self (Shapiro, 2001, 2006) and that effective treatment with EMDR should give the individual access to a wider range of memory and experience and the potential for resilience in situations of ongoing trauma.

Is there an explanation of why EMDR may have been successful in these cases and why, without specific prompting or training, children appear to have responded differently to the second trauma than they did to the first?

The family factors, often associated with resilience (Harvey, 2007), were the same or similar prior to the first incident as they were prior to the second incident. What seems to be the significant intervening variable is the EMDR group work. If EMDR does in fact work at a deep level, enabling the brain to process memories adaptively, then the resilience shown to the second incident is explicable in adaptive information processing terms in that the child would have access to semantic rather than episodic memory.

What does seem clear from the present clinical report is that, in a situation of ongoing trauma, the EMDR group protocol helped the children to recover

from symptoms associated with posttraumatic stress and to maintain their improvements. The serendipitous findings, following further trauma, also suggest that the children were able to develop mechanisms of psychological and emotional resilience, coping strategies, and some sense of inoculation against the impact of further trauma.

As noted by Jarero et al. (2006), there is a need for more systematic and controlled research. However, in the present case study, the finding that the seven children responded well to the EMDR approach, with a reduction of symptoms of ASD, and that they showed a lack of relapse after the second trauma and maintained recovery in a situation of ongoing conflict, suggests that EMDR may have been significant in building resilience and dismantling fear.

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