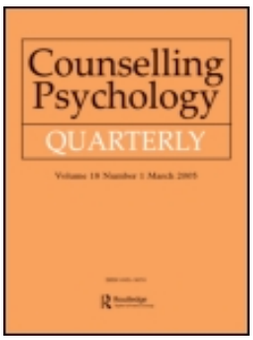

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Training Pakistani mental health workers in EMDR in the aftermath of the 2005 earthquake in Northern Pakistan

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The primary objective of this article will focus predominantly upon EMDR as an evidence-based treatment intervention for psychological trauma. It outlines in particular an EMDR Humanitarian Assistance Training Programme that took place in Abbotabad and Rawalpindi in response to the Pakistan earthquake, 2005, in helping to train teams of mental health workers in EMDR so as to enable them to treat psychological trauma symptoms of earthquake survivors. Results from two preliminary studies will be presented outlining the effectiveness of EMDR with two psychological trauma populations in Pakistan. This article also discusses the rationale for widening the trainings to different parts of Pakistan to include other significant traumas currently affecting some parts of the Pakistani population.

Keywords: psychological; trauma; PTSD; EMDR; humanitarian; Pakistan

Introduction

When considering effective psychological interventions for the treatment of psychological trauma, Foa, Keane, Friedman, and Cohen (2009), Steele, Van der Hart, and Nijenhuis (2005) and Van der Kolk (1996) stipulated that such treatment should be 'Phase-Orientated' to include the following elements

(1) Stabilisation
(2) De-conditioning of the traumatic memories and responses
(3) Re-structuring of trauma-related schema
(4) Re-establishment of secure, social connections and interpersonal efficacy
(5) Accumulation of restitutive emotional experiences

Although many psychological treatment interventions to date include many of the elements of these five phases there are two in particular which incorporate each of these five elements namely that of Trauma Focussed Cognitive Behavioural Psychotherapy (TF-CBT) and Eye Movement Desensitisation and Reprocessing (EMDR; Spates, Koch, Cussack, Pagoto, & Waller, 2009). In 2005 the United Kingdom National Institute for Health and Clinical Excellence (NICE), an organisation set up by the British Government to consider evidence based practice

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interventions in health care, stipulated that all Post Traumatic Stress Disorder (PTSD; APA, DSM-TR 309.81, 2000) sufferers should be offered a course of trauma-focussed psychological treatment of either TF-CBT or EMDR (NICE, 2005). This was also supported by an extensive Cochrane Study carried out by Bisson and Andres (2007) and Bisson et al. (2007) which undertook a systematic and meta-analysis of psychological treatment for chronic PTSD reviewing 38 randomised control trials. It concluded that the first line psychological treatment for PTSD should be TF-CBT or EMDR. However, as Dworkin (2005) considers, where TF-CBT is seemingly considered, more mainstream EMDR is often viewed with some degree of scepticism and suspicion despite its ever increasing evidence base. A critical aspect of distinction between TF-CBT and EMDR centres upon each being considered as a psychotherapy approach. To establish a paradigm as an empirically supported psychotherapy approach for diagnoses there needs to be at least three independent, methodologically sound studies demonstrating its efficacy in order for it to be then accepted as a scientifically recognised intervention for a given field of application (Chamberless & Ollendick, 2001). Of the 12 core fields for a paradigm to be considered as a psychotherapy approach, it must be accepted as efficacious in over 50% of the fields. CBT is accepted in 10 of the 12 core fields whereas EMDR is only accepted for that of PTSD (Shapiro, 2009). This then creates an anomaly between that of evidence based practice (EBP) and practice based evidence (PBE) as many EMDR clinicians utilise EMDR in many of the core fields where its empirical support is not presently as strong as it is for that of PTSD (Bisson & Andrew, 2007; Bradley, Greene, Russ, Dutra, & Westen, 2005; Davidson & Parker, 2001; Maxfield & Hyer, 2002; Seidler & Wagner, 2006). Following a review of seven meta-analyses which explored the effectiveness of EMDR, Spates et al. (2009, p. 298) concluded that EMDR was an effective treatment for PTSD, and equally effective as exposure-based therapies, with large effect sizes, and considered EMDR as robust in its overall effect, recommending it as a Level A treatment intervention for adult PTSD. This is further supported by Maxfield (2007) who points out that in the 20 years since the inception of EMDR, the only disorder for which EMDR has established efficacy is PTSD. While the vast majority of EMDR clinicians routinely report success with a myriad of other mental health conditions, including anxiety and affective disorders, the provision of EMDR for non-PTSD disorders can still be considered only experimental and untested.

Eye movement desensitisation and reprocessing (EMDR)

Shapiro (2007) describes EMDR as an integrative, client-centred psychotherapy that emphasises the brain's information processing system and memories of disturbing experiences as the bases of those pathologies not caused by organic deficit or insult. She goes on to state that EMDR addresses the experiences that contribute to clinical conditions and those needed to bring the client to a robust state of psychological health. EMDR assumes that a trauma memory is information about the event that has become locked in the nervous system almost in its original form (Van der Kolk, 2002). These are manifested in terms of images, thoughts, sounds, smells, emotions, physical sensations and beliefs (Servan-Schreiber, 2003). A central hypothesis within EMDR, purported by Shapiro (1989, 1995, 2001, 2007) is the proposed model of Adaptive Information Processing (AIP) and learning. It acknowledges that as human

beings we possess a physiologically-based information processing system which is responsible for digesting or metabolising information so that it can be used in a healthy life-enhancing manner. Part of our hard wiring is an innate natural tendency towards mental health where psychological self-healing is just as purposeful as other physiological processes (Farrell, Dworkin, Keenan, & Spierings, 2010).

EMDR (Shapiro, 2001) contains eight treatment phases and addresses past, present and future aspects of disturbing memories. In Phase 1 (history taking), the therapist identifies memories of traumatic events that have been inadequately processed. Phase 2 (preparation) is focused on building a therapeutic alliance and ensuring the client's readiness for treatment. Processing of unresolved memories is conducted during Phases 3–6 (assessment, desensitisation, installation, body scan). Phase 7 outlines steps for closure of the session, and Phase 8 (re-evaluation) is conducted at the beginning of each subsequent session. During the processing phases, the client first identifies the perceptual, cognitive, somatic and affective components of the target memory, and rates the level of emotional disturbance, using the Subject Units of Disturbance (SUD) scale (0 = no disturbance; 10 = worst possible). Then the client focuses on the memory while simultaneously attending to an external Bilateral Stimulus (BLS)/Dual Attention Stimulus (DAS) for about 25 s. BLS can be horizontal eye movements, or alternating bilateral tactile or auditory stimulation. After each set of dual attention the client is asked what new material was elicited; this new material generally becomes the focus of the next set of BLS. This procedure continues throughout the session, with alternating elicitation of new material, and subsequent focus on that material with BLS. Sometimes, the client's processing may stall, with no new material reported. When this happens, the therapist can suggest a new topic for attention during the next set of BLS. This intervention is called a 'cognitive interweave', and its purpose is to facilitate processing. As the session continues, the client typically describes the elicitation of more adaptive information and reports a decrease in distress. When the SUD rating becomes 0, a new positive belief about self is paired with the memory of the targeted incident, using BLS. The memory is considered to be fully processed when the client reports no distress, and endorses a new adaptive and positive perspective. Processing is expected to result in an alleviation of related symptoms and reduction of problematic behaviours (Farrel et al., 2010, pp. 127–128).

Since its serendipitous inception, Shapiro (2007) suggests that, EMDR has moved from that of a simple technique and method to a distinctive psychotherapeutic approach that guides case conceptualisation and a protocol treatment intervention of which Table 1 outlines six stages in its development. As mentioned earlier the ever increasing EPB and PBE of EMDR is used in supporting the potential effectiveness of the utilisation of EMDR with other mental

Table 1. Six stages in the development of EMDR.

Stage 1 – Revolutionary (evangelical)
Stage 2 – Critical review
Stage 3 – Dismantling
Stage 4 – More robust evidence base
Stage 5 – Political acknowledgement – adoption in both National and International Guidelines as an effective evidence based treatment for PTSD
Stage 6 – Increasing the EBP and PBE for other mental health conditions

health conditions. However, despite the importance of Stage 5 in the validation of EMDR as a 'treatment of choice for PTSD', the last 20 years has not seen significant changes to the training of EMDR. The current training provision for EMDR is primarily on a commercial basis; however, to sustain the increasing importance of EBP, there is an argument for the shift of EMDR training to within an academic institutions so as to best augment its future research evidence base (Farrell, P.S. Keenan, L. Keenan, & Tareen, 2008).

The central controversy surrounding EMDR is that of the eye movements themselves (Spates et al. 2009). Shapiro (1995) herself considered that EMDR seems to free the information processing system and allows links to more adaptive information. Another way of considering this is that by down regulating the Amygdala, found in the Limbic system, this then allows the pre-frontal cortex, the location of this more adaptive information, to come back on line. Therefore, the question that arises is: are the eye movements central to the EMDR process? The answer is both yes and no. Within EMDR the eye movements themselves are not the therapy. The reason why they came about was that Shapiro wanted the client to simulate a similar mechanism to rapid eye movement (REM) sleep. However, she quickly found that clients needed a stimulus to follow to which she therefore obliged by getting the client to track her hand movements whilst the client is also mindful of the specific attributes of the trauma material. What the eye movements do is stimulate the thalamus. However, the thalamus is stimulated not just by eye movements, it is also receiving both auditory and somatosensory data. This distinction is important however for different client populations, particularly those who would find the physical proximity of eye movements too distressing. Within EMDR the eye movements, auditory or somatosensory stimulus is referred to as BLS.

Both EMDR and TF-CBT are ostensibly experiential therapies rather than talking therapies, through the relieving and releasing of emotions, which then enables effective integration. One of the arguments to support why EMDR and TF-CBT are effective is that they both share the same neurobiological objective and that is to down regulate the Amygdala so as to allow the hippocampus and medial pre-frontal cortex to come back on line. As Table 2 demonstrates, both EMDR and TF-CBT have more in common than divides them (Farrell, 2008).

When considering the core constructs of psychological trauma and the various evidence based treatment interventions available, these are often initially defined

Table 2. Common themes between EMDR and TF-CBT.

☐ Importance of a therapeutic relationship in correlation to an effective outcome
☐ Identifying intrusive memories
☐ Identifying trigger factors
☐ Utilisation of imagery
☐ Affect regulation
☐ Cognitive reappraisal
☐ Challenging avoidance
☐ Exposure
☐ Psycho-education
☐ Addressing the past, present and future aspects of trauma experiences

within a cultural context raising a question as to how these frameworks then translate to other cultures around the world. Although many of the conceptual frameworks used surrounding psychological trauma are predominantly North American, traumas as a phenomenon transcends all cultures (Wilson & So-Kum Tang, 2007). So how would EMDR, as an effective evidence based psychological treatment intervention, adapt to being utilised by mental health clinicians in Pakistan?

EMDR training in Pakistan

Since the early 1990s, throughout the world, many thousands of mental health clinicians have been trained in EMDR. One of the important developments in training that took place in the late 1990s was the establishment of EMDR Humanitarian Assistance Programmes (EMDR HAP). These trainings have taken place in many trauma sites throughout the world following natural disasters, war and terror zones, areas of deprivation and human design disasters. One such natural disaster occurred on Saturday, 8 October 2005, when a devastating earthquake measuring 7.6 on the Richter scale struck northern Pakistan. The magnitude of the earthquake was such that it collapsed mountains, altered the course of water ways and wiped entire villages off the face of the earth. Some 400,000 houses were destroyed, over 73,000 people perished including some 35,000 children, tens of thousands of families lost an entire generation, and over 135,000 were injured, mostly women, children and elderly (Farrell et al., 2008).

Pakistan is a strategically important country in South Asia of geographic and political importance. The predominant religion of the country is Islam and, of the just under 160 million population, 97% are Muslims. Pakistan has more than 17 languages and numerous dialects; the composition of population is: Punjabis, 48%; Sindhis, 12%; Pashtuns, 8%; Mohajirs, 8%; Saraikis, 10%; Baluchis, 2%; Brahuis, 1% and the remaining, others. The literacy rate of the population is approximately 48.7% (Gadit, 2007). One of the consequences of such a low level of literacy is that a large number of the Pakistani population believe in supernatural things as being a cause of their ill health and therefore seek help from shamans and other alternate practitioners (Gadit, 2003). There are approximately 400 psychiatrists, 480 psychologists, 600 mental health social workers and less than 100 psychiatric/mental health nurses for the entire nation.

Responding to this natural disaster, in March 2007, the first University based EMDR HAP project was launched in Ayub Medical College, Abbotabad, the city closest to the epicentre of the earthquake, with a second wave of trainings taking place at the Department of Psychiatry, Military Hospital, Rawalpindi, August 2007, a third wave in Karachi, December 2008 and a fourth wave in Lahore, March 2010. This humanitarian assistance programme is a collaborative project between EMDR Europe and the University of Birmingham, UK, with the main contributors to the project being those from the University of Birmingham, Belfast Health & Social Care NHS Trust, Edge Hill University Liverpool and the Centre for Trauma Research & Psychosocial Interventions (CTRPI), Rawalpindi, Pakistan.

To date over 100 Pakistani mental health workers have now been fully trained in EMDR including military psychiatrists, civilian psychiatrists, clinical psychologists and field social workers who were predominantly working with earthquake survivors. An essential part of the programme was in ensuring effective

communication, support and clinical supervision between the Pakistan mental health workers and the UK team. Our experience in talking with local service leaders and clinicians was that there was significant resentment and anger towards Non-Government Organisations (NGO) in their response to the aftermath of the earthquake in it that they 'quickly arrived and quickly disappeared'. An essential part of the philosophy of the EMDR HAP project was in ensuring that this was not the case. Consequently, this made the issue of effective communication vitally important. Due to the geographical distance, electronic communication was used. Each of the mental health workers were allocated a UK and Ireland clinical supervisor and kept in regular contact. This made a huge difference in the success of the project as the mental health workers felt supported in between each of the training visits.

In addition, the mental health workers are encouraged to collect pre- and post-outcome psychometric data on the people they are utilising EMDR with. This includes: demographic data, levels of intrusivity, hyper-arousal, avoidant behaviour, pervasive cognitions, overall levels of disturbance and current issues for clinical supervision. This data is essential in evaluating the ongoing project and will be presented in future publications. However, two preliminary studies are presented here to indicate some of the developing research activity currently emerging in Pakistan. This research was carried out by three Consultant Psychiatrists, all trained in EMDR. The first research project is that of Ali and Rana (2008) who treated 10 earthquake survivors utilising EMDR and the second, that of Bilal and Rana (2008) who explored the use of EMDR with military survivors of suicide bomb blasts in Northern Pakistan.

The Ali and Rana (2008) study was based at the Centre for Trauma Research and Psychosocial Intervention at Military Hospital, Rawalpindi. This military hospital provides tertiary level mental health care and is a referral point for mental health facilities. This centre was established in collaboration with the Aberdeen Centre for Trauma Research in direct response to providing services for the earthquake affected area. Geographically, however, the Centre is located at a 4 hours' drive away from the epicentre of the earthquake. The research participants for this particular study where from Muzaffarabad, the capital of Pakistani Kashmir, one of the cities hardest hit by the earthquake. Each of the research participants met the ICD-10 diagnosis for PTSD. All participants gave informed consent regarding their participation in the study. Pre-treatment assessment was carried out by an independent assessor utilising the Impact of Events Scale (IES) and Global Assessment of Functioning (GAF). Each stage of the EMDR protocol was carried out for each client by the same EMDR clinician with the average duration of each session being between 30 to 60 minutes. Eye Movements were the predominant form of DAS. Post-treatment assessment was conducted 1 week after the completion of treatment with the same procedure as at pre- treatment. Results were as indicated in Table 3.

In the Bilal and Rana (2008) study the participants were the direct survivors of two separate suicide bomb blasts that took place in Rawalpindi. The participants were bomb blast survivors who were serving armed forces personnel who were residing in regimental premises at the time of the suicide bombings. Both blasts entailed a huge death toll as well as extensive physical injuries to many military personnel. Survivors were rescued by military health professionals and evacuated to a tertiary hospital for immediate surgical interventions and rehabilitation. The initial inpatient stay was dominated by important surgical interventions and

Table 3. Overview of results ($N = 10$).

	Minimum	Maximum	Mean
Total IES score before treatment	48.00	58.00	51.1000
Total IES score after treatment	12.00	31.00	18.6000
Intrusion subscale score before treatment	22.00	32.00	27.4000
Intrusion subscale score after treatment	5.00	12.00	7.6000
Avoidance subscale score before treatment	20.00	27.00	22.7000
Avoidance subscale score after treatment	7.00	19.00	10.6000
SUD before treatment	7.00	9.00	8.1000
SUD after treatment	0.00	2.00	0.5000
VOC before treatment	2.00	3.00	2.2000
VOC after treatment	4.00	7.00	6.5000
Global assessment of functioning before treatment	40.00	60.00	50.00
Global assessment of functioning after treatment	60.00	80.00	70.00
Age of the client in years	20.00	55.00	35.2000
Total no. of sessions	5.00	7.00	5.9000
Average duration of session in each case (minutes)	30.00	45.00	35.0000

due to the extent of many people's injuries many life-saving protocols were deemed necessary. The post-surgical provision for mental health rehabilitation was also carried out at the same CTRPI as mentioned earlier.

The seven individuals selected for this study were armed forces personnel who had been victims of the suicide bomb blasts. Each of these subjects fulfilled the ICD-10 diagnostic entry criteria of PTSD. The number of EMDR sessions administered varied depending on the severity of symptoms for each individual. Post EMDR treatment, all participants indicated significant symptom reduction in relation to intrusive images, nightmares, hyper-arousal, autonomic instability and avoidance. There was also improvement in participants' quality of sleep. Prior to EMDR treatment, participants had a tendency to remain withdrawn and socially isolated behind the guarded walls of the regimental barracks. However, post EMDR, there was a consistent and significant improvement in participants' social and occupational levels of functioning. Furthermore, there was a marked reduction of basal anxiety levels in all seven of the participants as indicated in Table 4. Scores on IES-R, done after completion of the EMDR treatment, improved from initial pre-EMDR score to post-EMDR scores for the seven subjects who completed EMDR.

Bilal and Rana (2008) noted an interesting observation of the research participants relating to the emotions of anger and rage in that initially these emotions were not directed towards the two suicide bombers and the expected level of distress reduced significantly once the focus was drawn to the perpetrators. Both researchers argue the need to undertake further research in this area as to why the suicide bombers were not the nucleus of responsibility as might have been expected by the survivors who sustained such significant physical injuries and psychological distress. This suggests an interesting cultural dimension worthy of further investigation.

At 2-weeks' follow-up, Bilal and Rana (2008) collated research participants' own outcome indicators post the EMDR sessions

- Feeling less troubled by trauma memories and reminders while awake and in their dreams

Table 4. EMDR data results.

Client No.	Statement about problem Negative cognition	Initial SUDS	No. of sessions	Last SUDS	MEAN IES-R SCORE PRE	MEAN IES-R SCORE POST	Positive cognition
P1	I should have done something	10	5	2	41	18	I did the best I could
P2	I cannot protect myself	9	6	1	38	15	I can take care of myself
P3	I deserve to be miserable	10	6	2	40	14	I deserve to be happy
P4	I cannot trust myself	10	8	2	56	16	I can learn to trust myself
P5	I deserve to die	9	7	1	65	15	I deserve to live
P6	I am in danger	9	3	1	53	17	I am safe now and its over
P7	I deserve only bad things	10	5	2	67	13	I deserve good things

- Enhanced ability to cope with trauma memories and reminders without simply trying to avoid troubling thoughts, conversations, people, activities or place of blasts
- Able to enjoy pleasurable activities and to be emotionally involved in relationships, as well as feeling that there is a future to look forward to
- Feeling less tense, stressed, irritable or angry, easily startled and on-guard, and more able to sleep restfully without nightmares, able to concentrate on activities, and deal with pressure and conflict
- Markedly less anxious, worried, fearful or phobic, and less prone to panic attacks
- Feeling less depressed
- An increased sense of self-esteem and self-confidence

Conclusion

In reviewing these two studies, prior to 2007 EMDR was not a practiced psychological treatment intervention in Pakistan yet here are some initial indicators of its potential efficacy in two different trauma populations. This supports the argument in continuing to train mental health workers to effectively use EMDR as a treatment intervention in the management of psychological trauma for the people of Pakistan, and secondly that much further research is needed to support its efficacy in Pakistan. However, there is a question to consider in that if the earthquake occurred in the north of the country why are EMDR trainings currently being carried out in the south and east? As both these studies demonstrate, the psychological trauma of the Pakistani population is not just restricted to the earthquake area. In consultation with the British team of Clinical Supervisors following a content analysis of the issues raised within EMDR clinical supervision of the Pakistani Mental Workers, it was determined that very few of the client's trauma issues that supervisee's were bringing for clinical supervision were actually centred upon the earthquake itself. The main areas of concern expressed by supervisee's clients centred upon fears of terrorist activity, suicide bombings, religious extremism, domestic violence and abuse. These issues represent a much wider perspective of the trauma fabric of Pakistan. It was for this reason that the geographical range of the EMDR trainings widened to include the old capital, Karachi and then Lahore.

Pakistan is facing troubled times at present caught between the demands of being allied to the West and of being a devout, intrinsically conservative, Islamic Republic. The EMDR Pakistan Humanitarian Assistance Programme is playing a part in training mental health workers in an effective, evidence based, new psychological treatment intervention that can make a difference. As an emerging nation these are certainly troubled times for the people of Pakistan, a country currently facing its worst episode of flooding in the last 100 years. EMDR is increasingly more available in the west and increasing evidence suggests its proven efficacy. Early initial indicators suggest its potential benefit for the people of Pakistan. As the Pakistan founder, Muhammad Ali Jinnah, declared, if we want to make this great state of Pakistan happy and prosperous we should wholly and solely concentrate on the well-being of its people. EMDR does not cure malaria, it will not eradicate world poverty or prevent natural disasters or be a solution to all psychological ailments. However, emerging evidence suggests that EMDR can make an effective difference in enabling

a person to move from re-experiencing the past in the present to remembering the past in the present. Its ever increasing evidence base supports its utilisation as a front line intervention.

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