

NICE recommends EMDR for Post Traumatic Stress Disorder: Why?

James Ost, PhD

Senior Lecturer and Chartered Psychologist

University of Portsmouth

Hampshire, PO1 2DY, UK.

Simon Easton

Senior Lecturer and Chartered Clinical Psychologist

University of Portsmouth

Hampshire, PO1 2DY, UK.

Full reference: Ost, J., & Easton, S. (2006). NICE recommends EMDR for Post Traumatic Stress Disorder: Why? *Clinical Psychology Forum*, **159**, 23-26.

Summary: This paper reviews the promotion in the National Institute for Clinical Excellence (NICE) Guidelines for the treatment of Post Traumatic Stress Disorder (PTSD) (March 2005) of Eye Movement Desensitization and Reprocessing (EMDR) as an equivalent to Cognitive-Behavioural Therapy (CBT).

In 2002, Francine Shapiro and Louise Maxfield wrote about Eye Movement Desensitization and Reprocessing (EMDR), concluding: “Research investigating the eye movement component is inconclusive and compromised by poor methodology, including low power, and inappropriate subject and control selection” (Shapiro & Maxfield, 2002, p.124). In 2005, the National Institute for Clinical Excellence (NICE) report on treatments for Post Traumatic Stress Disorder (PTSD) concluded that, while

the effectiveness of EMDR was generally supported by their meta-analysis, "... the evidence base was not as strong as that for trauma-focused CBT [Cognitive-Behavioural Therapy], both in terms of the number of RCTs [Randomized Controlled Trials] available and the certainty with which clinical benefit was established" (National Institute for Clinical Excellence, 2005, p. 61). Nevertheless, the NICE guidelines recommend provision of EMDR and CBT for individuals who have experienced difficulties following a traumatic experience, apparently indicating equivalence of these two approaches. We would strongly question that implication of equivalence, given substantial reservations about the status of EMDR in the scientific literature. The NICE guidelines will lead to a belief in the value of EMDR among service providers, and the public, which will lead to increased demand for this poorly supported approach.

Why have NICE chosen to promote EMDR at this time? Can it really be given the same credence as the established CBT approach? We will not review here the evidence for CBT, as its use in a wide range of settings and with a wide range of difficulties has been considered in great depth elsewhere (Dobson, 2003, Nathan & Gorman, 2002). We do not, however, accept the use and promotion of CBT uncritically (King 1998; Chambless & Ollendick 2001; Marzillier 2004), but believe that its use can be supported by the available evidence, and specifically, to some degree, for post trauma distress (Harvey, Bryant, & Tarrier, 2003).

NICE argue that there is limited evidence in favour of the efficacy of EMDR when compared with waiting list controls on various measures. This can, however, be attributed to non-specific treatment effects (e.g. the expectation for improvement,

therapist attention, etc.; Cahill, Carrigan & Frueh, 1999; Herbert et al. 2000, Oei & Shuttlewood, 1996). NICE also report inconclusive evidence of any clinically important differences between EMDR and other treatments (e.g. trauma-focused CBT, stress management; see Taylor et al., 2003), this being consistent with a critical analysis of EMDR by Lohr, Hooke, Gist and Tolin (2003), who concluded that “comparisons with effective treatment or effective treatment components show the relative effects of EMDR to be weak or negligible” (p. 254).

It is our view that The NICE report drew on an incomplete sample of studies that have been conducted into the effectiveness of EMDR, and, so failed to take into account the reservations about EMDR that have been expressed in the psychological literature (e.g. Cahill et al., 1999; Cusack & Spates, 1999; Davidson & Parker, 2001; Devilly, 2002; Devilly, Spence & Rapee, 1998; Herbert, et al., 2000; Lohr et al., 2003; Lohr, Tolin & Lilienfeld, 1998; McNally, 1999a; Muris & Merckelbach, 1999; Rosen, Lohr, McNally & Herbert, 1998).

We suggest that there are many reasons for urging caution in interpreting the findings of EMDR research. Some of these concerns are focussed on the way in which outcomes of EMDR treatment have been evaluated, whilst the weak theoretical underpinnings for the components of the treatment do not appear to be supported by research. Evaluation of EMDR and the standing of supporting theoretical rationale are reviewed below.

Evaluation of the efficacy of EMDR has tended to take two forms – comparative studies or dismantling studies. The NICE report considered the former, which aim to

compare EMDR to other established techniques, such as CBT and exposure therapy (e.g. Taylor et al. 2003), but not the second body of research. The NICE report indicates that comparative studies provide no evidence that EMDR produces more positive clinical outcomes than CBT, relaxation training, or exposure therapy (Davidson & Parker, 2001). There is, however, some evidence that, compared to established techniques, the outcomes of EMDR can be less favourable (Taylor et al., 2003). At best it might be seen as equivalent, but the evidence suggests it might be more likely to be less effective – so why recommend EMDR?

The NICE report did not consider the second way to evaluate the effectiveness of EMDR, which involves dismantling studies to determine whether any of the specific components of the intervention (eye movements, desensitization or reprocessing) have a unique effect in producing positive clinical outcomes. Dismantling studies show that the eye movement component (EM) is inert, and has no unique effect in terms of inhibiting negative emotions (Muris & Merckelbach, 1999), or in producing desirable therapeutic outcomes (Carrigan & Levis, 1999; Devilly et al., 1998). This would be consistent with Shapiro's (1999) acknowledgement that eye movements may be an unnecessary component of the treatment. Furthermore, Cusack and Spates (1999) concluded that the reprocessing element (R) of EMDR did not contribute to treatment outcome either.

If the eye movement (EM) and reprocessing (R) components are inert, then it would seem that any positive change in EMDR studies, as indicated in the comparative studies cited by the NICE report, are more likely to be the result of either the desensitization (D) component that is common to many other interventions, or non-

specific treatment effects (Carrigan & Levis, 1999; Cusack & Spates, 1999; Davidson & Parker, 2001; Lohr et al., 2003; Lohr, Lilienfeld, Tolin & Herbert, 1999; Lohr et al. 1998; Taylor et al., 2003). This reading of the literature led McNally (1999b, p. 619) to conclude that “what is effective in EMDR is not new, and what is new is not effective.”

So, if the dismantling studies show that the novel EM and R components of EMDR are inert, why do the technique’s proponents continue to claim that these components are necessary? Shapiro (1999) proposed that memories for traumatic experiences are stored differently from memories of non-traumatic experiences. Specifically, Shapiro (1999, pp. 39-40) argued that: “... human beings possess a physiologically based information-processing system that, under normal circumstances, will naturally respond to and resolve everyday minor disturbances. However, when a trauma occurs, this system can become imbalanced, causing the information to become “locked in the brain” in the form it was input ... This information remains in neurobiological stasis ... and is thus incapable of effecting the appropriate connections that would allow the resolution of the traumatic event to occur.”

Shapiro (1999) argued that the eye movement (EM) component is associated with bilateral stimulation in EMDR, a procedure that allows the traumatic information in ‘neurological stasis’ to be ‘unlocked’ and then reprocessed (R). This claim is not supported by the psychological literature (Muris & Merckelbach, 1999). At the very least, the idea that memories for traumatic experiences are ‘stored’ differently from memories for non-traumatic experience is controversial (Kihlstrom, 1995; McNally, 2003; Muris & Merckelbach, 1999; Ost, 2003; Shobe & Kihlstrom, 1997). But more

than this, there is substantial evidence that memories of traumatic events are not 'locked in the brain' in a state of 'neurological stasis', nor are they so distinct from memories for non-traumatic events (Muris & Merckelbach, 1999; McNally, 2003; Nourkova, Bernstein & Loftus, 2004; Shobe & Kihlstrom, 1997). Perhaps more importantly, the theoretical justification of the eye movement (or 'bilateral stimulation') component is substantially unsatisfactory (Muris & Merckelbach, 1999). Whilst Shapiro offers what she sees as a viable neurobiological rationale for this component (Shapiro, 1995), others have suggested that this explanation approaches "the limits of neurobabble" (Rosen et al., 1998, p. 100).

In conclusion, we believe that it is inappropriate to recommend EMDR as there is no evidence that it is a unique or effective treatment. Given the weight of evidence supporting a recommendation of CBT, compared with the mixed and limited evidence relating to EMDR, we cannot understand why EMDR was endorsed by NICE at this time. It might be that the authors of the NICE report thought that the comparative studies they reviewed appeared, at first glance, to suggest that EMDR produces clinical outcomes that were, at the very least, no worse than those obtained using other interventions. Unfortunately, a closer look at dismantling studies would have shown that only the desensitization component (D) appears to be active, whilst the novel eye movement (EM) and reprocessing (R) components appear to be inert and have no coherent theoretical underpinning. If the only active component of EMDR is already part of what appears to be a successful, and widely used, intervention for post trauma psychological difficulties, (e.g. CBT), it does seem strange that NICE elected to recommend EMDR as an equivalent to CBT.

Word count: 2215 (incl. refs)

References:

- Cahill, S. P., Carrigan, M. H. & Frueh, B. C. (1999). Does EMDR work? And if so, why?: A critical review of controlled outcome and dismantling research. *Journal of Anxiety Disorders, 13*, 5-33.
- Carrigan, M. H. & Levis, D. J. (1999). The contributions of eye movements to the efficacy of brief exposure treatment for reducing fear of public speaking. *Journal of Anxiety Disorders, 13*, 101-118.
- Chambless, D., & Ollendick. (2001) Empirically supported interventions: controversies and evidence. *Annual Review of Psychology, 52*, 685-716
- Cusack, K. & Spates, C. R. (1999). The cognitive dismantling of eye movement desensitization and reprocessing (EMDR) treatment of posttraumatic stress disorder (PTSD). *Journal of Anxiety Disorders, 13*, 87-99.
- Davidson, P. R. & Parker, K. C. H. (2001). Eye movement desensitization and reprocessing (EMDR): A meta-analysis. *Journal of Consulting and Clinical Psychology, 69*, 305-316.
- Devilley, G. J. (2002). Eye movement desensitization and reprocessing: A chronology of its development and scientific standing. *Scientific Review of Mental Health Practice, 1*, 113-138.
- Devilley, G. J., Spence, S. H. & Rapee, R. M. (1998). Statistical and reliable change with eye movement desensitization and reprocessing: Treating trauma within a veteran population. *Behavior Therapy, 29*, 435-455.
- Dobson, K. (2003). *Handbook of cognitive therapy*. New York: Guilford Press.

- Harvey, A.G; Byrant, R,A TARRIER, N (2003) Cognitive behaviour therapy for posttraumatic stress disorder. *Clinical-Psychology-Review*, 23, 501-522.
- Herbert, J. D., Lilienfeld, S. O., Lohr, J. M., Montgomery, R. W., Donohue, W. T., Rosen, G. M. & Tolin, D. F. (2000). Science and pseudoscience in the development of eye movement desensitization and reprocessing: Implications for clinical psychology. *Clinical Psychology Review*, 20, 945-971.
- Kihlstrom, J. F. (1995). The trauma-memory argument. *Consciousness and Cognition*, 4, 63-67.
- King, R. (1998). Evidence based practice where is the evidence? The case of CBT and depression. *Australian.Psychologist*, 33, 2, 83-88
- Lohr, J. M., Hooke, W., Gist, R. & Tolin, D. F. (2003). Novel and controversial treatments for trauma-related stress disorders. In S. O. Lilienfeld, S. J. Lynn & J. M. Lohr (Eds.), *Science and pseudoscience in clinical psychology* (pp. 243-272). New York: Guilford Press.
- Lohr, J. M., Lilienfeld, S. O., Tolin, D. F. & Herbert, J. D. (1999). Eye movement desensitization and reprocessing: An analysis of specific versus non-specific treatment factors. *Journal of Anxiety Disorders*, 13, 185-207.
- Lohr, J. M., Tolin, D. F. & Lilienfeld, S. O. (1998). Efficacy of eye movement desensitization and reprocessing: Implications for behavior therapy. *Behavior Therapy*, 29, 123-156.
- Marzillier, J. (2004) The myth of evidence based therapy. *The Psychologist*, 17, 7, 392-6
- McNally, R. J. (1999a). EMDR and Mesmerism: A comparative historical analysis. *Journal of Anxiety Disorders*, 13, 225-236.

- McNally, R. J. (1999b). On eye movements and animal magnetism: A reply to Greenwald's defense of EMDR. *Journal of Anxiety Disorders, 13*, 617-620.
- McNally, R. J. (2003). *Remembering trauma*. Harvard, MA: Harvard University Press.
- Muris, P. & Merckelbach, H. (1999). Traumatic memories, eye movements, phobia, and panic: A critical note on the proliferation of EMDR. *Journal of Anxiety Disorders, 13*, 209-223.
- Nathan, J., & Gorman, J. (Eds.) (2002). *A guide to treatments that work* (2nd edition). London: Oxford University Press.
- National Institute for Clinical Excellence (2005). Post-traumatic stress disorder: The management of PTSD in adults and children in primary and secondary care. Retrieved May 31, 2005 from <http://www.nice.org.uk/pdf/CG026fullguideline.pdf>
- Nourkova, V., Bernstein, D. M., & Loftus, E. F. (2004). Altering traumatic memory. *Cognition & Emotion, 18*, 575-585.
- Oei, T., & Shuttlewood, G. (1996) Specific and nonspecific factors in psychotherapy: *Clinical Psychology Review, 16*, 2, 83- 103.
- Ost, J. (2003). Essay review: Seeking the middle ground in the 'memory wars'. *British Journal of Psychology, 94*, 125-139.
- Rosen, G. M., Lohr, J. M., McNally, R. J. & Herbert, J. D. (1998). Power therapies, miraculous claims, and the cures that fail. *Behavioral and Cognitive Psychotherapy, 26*, 99-101.
- Shapiro, F. (1995). *Eye movement desensitisation and reprocessing: Basic principles, protocols, and procedures*. New York: Guilford Press.

- Shapiro, F. (1999). Eye movement desensitization and reprocessing (EMDR) and the anxiety disorders: Clinical and research implications of an integrated psychotherapy treatment. *Journal of Anxiety Disorders, 13*, 35-67.
- Shapiro, F., & Maxfield, L. (2002). In the blink of an eye. *The Psychologist, 15*, 120-124.
- Shobe, K. K. & Kihlstrom, J. F. (1997). Is traumatic memory special? *Current Directions in Psychological Science, 6*, 70-74.
- Taylor, S., Thordarson, D. S. Maxfield, L., Fedoroff, I. C., Lovell, K. & Ogradniczuk, J. (2003). Comparative efficacy, speed, and adverse effects of three PTSD treatments: Exposure therapy, EMDR, and relaxation training. *Journal of Consulting and Clinical Psychology, 71*, 330-338.