



EMDR – AIP Model, Neurobiology, Memory & Case Conceptualisation

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EMDR Case

- 47 year old West Indian male
- Being driven by nephew, windy day, car struck by metal bar (2009)
- Driver sustained severe head injury
- Worst image: holding his nephew's head together until paramedics arrived
- Treatment to date: 6 counselling sessions & 10 session CBT
- Still had PTSD
- Responded to just 4 Sessions of EMDR

EMDR Case

- “So what you want me to do is think about that worst memory of holding my nephew’s brain, even though that memory makes me feel physically sick and keeps me awake at night. You also want me to think about that cognition that it is ‘my fault’, be aware of the emotions it generates and how it makes me feel? Yeah? And then you are going to wave your hand in front of my face making my eyes move side to side? And that’s going to help, yeah? Ok then.”

Mechanism, Model & Methodology within EMDR

- **Mechanism** – neurobiological underpinnings are unknown for any form of psychotherapy
- **Model** – independent of particular neurobiological mechanism it interprets clinical phenomena, predicts successful application and guides clinical practice
- **Methodology** – standardises procedures and protocols guided by articulated principles



Six Stages in the Development of EMDR

(1)

- Stage 1 – Revolutionary (Evangelical)
- Stage 2 – Critical Review
- Stage 3 – Dismantling
- Stage 4 – More robust evidence base
- Stage 5 – Adoption in both National & International Guidelines as an effective evidence based treatment for PTSD
- Stage 6 – Increasing the EBP & PBE for other mental health conditions

What Clinical Guidelines Say: A Bewildering Picture

- US Institute of Medicine – endorses TF-CBT and Prolonged Exposure (PE) but not EMDR
- National Institute of Health & Clinical Excellence [NICE] (2005) - endorses TF-CBT & EMDR but not medication
- ISTSS (2008) - endorses TF-CBT, EMDR & Medication

140: Training Pakistani Mental Health Workers in EMDR in the Aftermath of the 2005 Earthquake in Northern Pakistan. Farrell, D. P., Georjon, P. J., Wajid Ali, M., Bhatt, S., Tahir, S., Ali, Georjon, L., & Nowrooz Hussain-Rana. 2011. Counselling Psychology Quarterly, June 2011, Vol. 24, No. 2, 128-137. 127-137

Australian Centre for Post Traumatic Mental Health (2007)

- Adults with PTSD should be provided with trauma focussed interventions (TF-CBT & EMDR) **in addition to exposure therapy**
- Available evidence does not support the importance of EM's per se in EMDR
- Recommends that treatment gains are as a consequence of
 - Engagement with the traumatic memory
 - Cognitive reprocessing
 - Rehearsal of coping
 - Mastery of response

Meta-analyses

1. 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.
2. Maxfield, L., & Hyer, L.A. (2002). The relationship between efficacy and methodology in studies investigating EMDR treatment of PTSD. *Journal of Clinical Psychology, 58*, 23-41.
3. Bradley, R., Greene, J., Russ, E., Dutra, L., & Westen, D. (2005). A multidimensional meta-analysis of psychotherapy for PTSD. *American Journal of Psychiatry, 162*, 214-227.
4. Seidler, G.H., & Wagner, F.E. (2006). Comparing the efficacy of EMDR and trauma-focused cognitive-behavioral therapy in the treatment of PTSD: a meta-analytic study. *Psychological Medicine, 36*, 1515-1522.
5. Bisson, J., & Andrew, M. (2007). Psychological treatment of post-traumatic stress disorder (PTSD). *Cochrane Database of Systematic Reviews* 2007, Issue 3. Art. No.: CD003388. DOI: 10.1002/14651858.CD003388.pub3.

Davidson & Parker (2001)

- EMDR appears to be no more effective than other exposure techniques and evidence suggests that the EM, integral to the treatment, and its name, are unnecessary. (*Journal of Consulting & Clinical Psychology, Vol. 69. No. 4. Pgs 305-316*)
- APA Division 12 (2010)
 - Current Status of EMDR: **CONTROVERSIAL**
 - Comparing EMDR and exposure therapy without EM's has found no difference

Bilateral Stimulation (BLS) & Meta Analyses

- Lee, C. W., Taylor, G., & Drummond, P. D. (2006, March-April). **The active ingredient in EMDR: Is it traditional exposure or dual focus of attention?** *Clinical Psychology and Psychotherapy, 13*, 97-107. doi:10.1002/cpp.479.
- **EMDR with eye movement was found to lead to significantly greater improvement than EMDR without eye movement.**

Bilateral Stimulation (BLS) & Meta Analyses

- Schubert, S. J., Lee, C. W., & Drummond, P. D. (2011, January). The efficacy and psychophysiological correlates of dual-attention tasks in eye movement desensitization and reprocessing (EMDR). *Journal of Anxiety Disorders, 25*(2011), 1-11. doi:10.1016/j.janxdis.2010.06.024.
- **Eye movement component in EMDR is beneficial, and is coupled with distinct psychophysiological changes that may aid in processing negative memories**

Bilateral Stimulation (BLS) & Meta Analyses

- Jeffries, F.W. & Davis, P. (2012) **What is the Role of Eye Movements in Eye Movement Desensitization and Reprocessing (EMDR) for Post-Traumatic Stress Disorder (PTSD)? A Review** *Behavioural and Cognitive Psychotherapy* Journal October 2012
- **The results suggest support for the contention that EMs are essential to this therapy and that a theoretical rationale exists for their use..... it is suggested, however, that EMs may be more effective at reducing distress, and thereby allow other components of treatment to take place.**

Bilateral Stimulation (BLS) & Meta Analyses

- Lee, C.W & Cuijpers, P. (2012) A meta-analysis of the contribution of eye movements in processing emotional memories. Journal of Behaviour Therapy & Experimental Psychiatry. Doi:10.1016/j.lbtep.2012.11.001
- Eye Movements (EM's) do have an additional value in EMDR treatment that EM's do alter the processing of emotional memories the processes involved in EMDR are different from other exposure based therapies.

Psycho-physiological & Neurological Evaluations

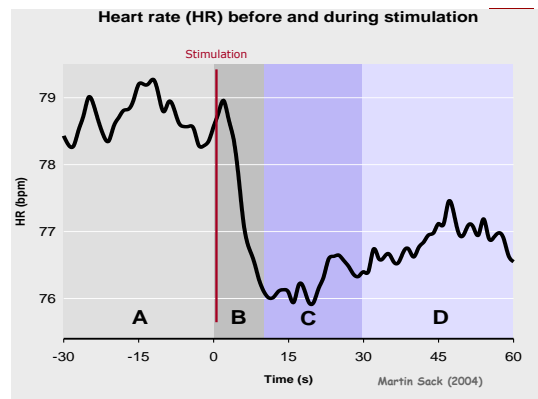
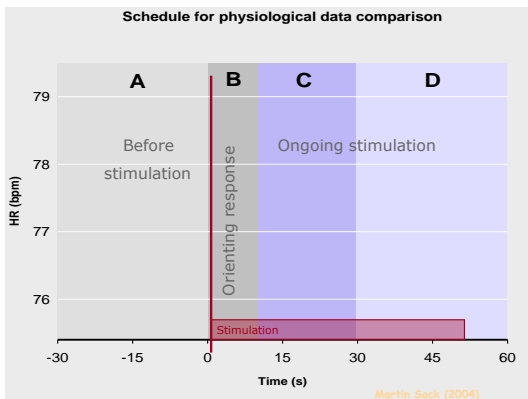
- 15 published case reports and controlled evaluations on EMDR which demonstrates the existence of psycho-physiological and neurobiological effects of EMDR treatment and BLS
- 14 Studies regarding EM's demonstrating consistent effects on
 - Vividness
 - Emotionality
 - Associative recall of autobiographical memory (Leeds, 2010)

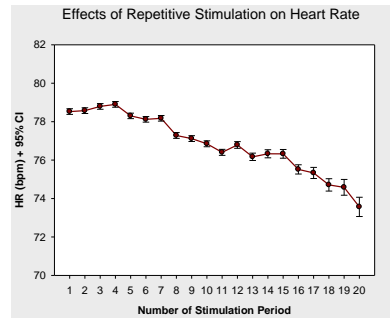
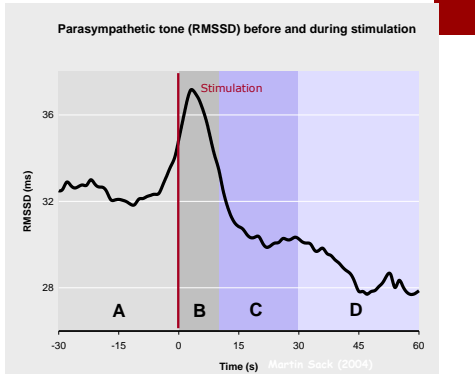
Davidson & Parker (2001)

- Used an analysis that weighted all studies equally rather than the usual practice to weight each study in relation to the number of participants and for the degrees of freedom to be calculated using the total number of participants
- However Lee (2006) demonstrated that EM were found to have a significant advantage over no EM's.
- See- Schubert, Lee & Drummond (2011)

Bilateral Stimulation in EMDR & Speed

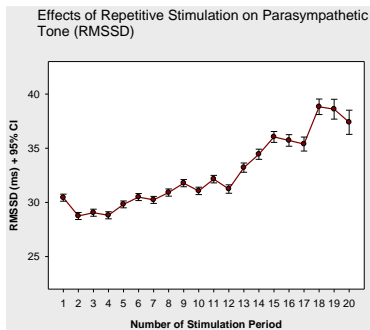
- Eye Movements
 - Stabilisation & Resource Building
 - Processing
 - Fast
- Audio
 - Mindful of sound as the client needs to also be able to hear the therapist
 - quality of sound, higher tolerance, eyes open/shut
- Tactile
 - Higher tolerance, physicality, with or without EM's





Main effects of stimulation period controlled for interactions with session number, random factor: patient (ANOVA): $F(19,217) 6.94, p < .001$

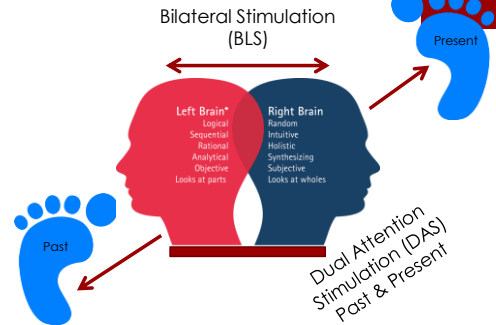
Martin Sack (2004)



Main effects of stimulation period controlled for influences of session number, random factor: patient (ANOVA): $F(19,293) 3.04, p < .001$

Martin Sack (2004)

Bilateral Stimulation & Dual Attention Stimulation



EMDR- ADAPTIVE INFORMATION PROCESSING (AIP) TREATMENT OVERVIEW

■ Shapiro (1995, 2001) proposed three principles that are core to AIP

■ AIP Principle 1:

■ As humans we possess an intrinsic information processing system that has evolved to enable us to reorganise our responses to disturbing events from an initial dysfunctional state of disequilibrium to a state of adaptive resolution

Adaptive Information Processing – Principle 2

■ Trauma, or persistent stress during a developmental stage, causes a blockage which disrupts this information processing system leaving the unresolved experience in a state specific form



Adaptive Information Processing - Principle 3



- EMDR procedural steps and bilateral stimulation (BLS) restore balance.
- Reprocessing continues to an adaptive resolution for the individual
- Recovery can be as rapid and as stable as for physical injuries
- The body, encoded within our DNA, has the capacity to engage its innate reparative system to heal
- EMDR psychotherapy is about removing the blockage to enable adaptive resolution

Adaptive Information Processing (AIP) Model



- AIP model explains clinical phenomena as present manifestations of past dysfunctionally stored memory events
- Guides case conceptualisation and procedures
- Predicts a positive outcome
- Generalisation of treatment effect
- Present symptom manifestations are as a consequence of unprocessed earlier memories
- Spontaneous diffusing of triggers
- Spontaneous emergence of internally generated adaptive behaviours

Hallmark of EMDR



- Physiologically stored memories are the primary foundation of pathology
- Primary agent of change in EMDR is specifically targeted information processing
- AIP model guides the clinical application of EMDR
 - Explanatory
 - Predictive of positive treatment effects

Ref: Shapiro, F. & Liliotis, D. (2011) *EMDR and the Adaptive Information Processing Model: Integrative treatment and case conceptualisation*. Clin. Soc. Work J. 39:191-200