EMDR Therapy Update: Theory, Research and Practice

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Adaptive Information Processing Model

- Unprocessed memories of adverse life experiences are the basis of a wide range of pathologies
- Phase 1—Past/present/future
- Phase 2—Incorporate and increase access to positive memory networks
- Phase 3—Access and delineate components of target
- Phase 4 through 6—Information accessed and processed as currently stored
- Phase 7—Shift focus from dysfunctional to positive networks/prepare for ongoing processing
- Phase 8—New experiences will stimulate previously dormant networks
- Three Pronged Protocol—Past events/Current triggers/Future templates

Future Template

1. Identify the future situation (based on recent experience or present trigger) the client would like to have a more adaptive response to:
   - "Identify a future situation and a positive belief (PC) you would like to have about yourself in that situation."
2. Run the movie
   - "While holding the positive belief about yourself in mind, run the movie of the situation as you would like to be able to respond, from beginning to end. Let me know if there is any part or part of the movie that are uncomfortable or challenging.
3. Reprocess as needed
   - Install PC to VOC=7
4.
Additional Targets

- The 8 phases and 3-pronged protocol should always be addressed in treatment.
- When integrating, add—do not subtract
- Additional targets
  - “Flashforwards”—fear of future, image of impending doom, disaster image, expected catastrophe

When to use in clinical practice?

- If all relevant memories of past events have been fully processed, and it is not possible to find any other memory that is at the root of client’s current symptoms
- Present: response to current trigger
- Standard processing with image, NC, PC, body sensation

Examples of the use of flashforwards

- Dog phobia (being attacked by a dog)
- Dental and medical phobias (extreme pain, being powerless, bleeding to death)
- Social phobia (being rejected or other embarrassing situation)
- Obsessive compulsive disorder (being contaminated; house in flame)
- Body dysmorphic disorder (a negative remark about appearance)
- Hypochondriasis (the end phase of a deadly disease)

De Jongh, 2012
Complete Processing of Past/Present/Future

- Additional EMDR targets
  - Positive future/goal first—in contrast to alternative negative future (Adler-Tapia, 2012; Popky, 1994, 2010)
  - Dysfunctional Positive Affect (Knipe, 2010)
  - “Positive Feeling State” for addictions (Miller, 2012, JEMDR)

Addictions

- Comprehensive processing in this specialty area
- First targets depend upon need/assessment of client
- Utilize 8 phases and three-pronged protocol
- If needed begin with “positive future”
- Target urges (Popky, 2010)
- Target positive feeling state (see Miller, 2012, JEMDR)
- Fully reprocess past/present/future

“Feeling-States” Targeted

- Single Case Study: Pregnant Smoker

Identify the most potent memory of the behavior (could be first, or more recent)

- Defiance / Rebellion
- Freedom
- “Bubble” (safety/protection)
- Nicotine ‘rush’
- “Now I can start my day, I’m whole”
AIP—Trauma and other adverse life experiences as the basis of pathology

- The innate information processing system becomes overwhelmed due to high arousal and stores the experience in memory in unprocessed form.


- "Harsh physical punishment [i.e., pushing, grabbing, shoving, slappping, hitting] in the absence of child maltreatment is associated with mood disorders, anxiety disorders, substance abuse/dependence, and personality disorders in a general population sample."

AIP


- "These findings parallel results of previous reports of psychopathology associated with childhood exposure to parental verbal abuse and support the hypothesis that exposure to peer verbal abuse is an aversive stimulus associated with greater symptom ratings and meaningful alterations in brain structure."

AIP


"Trauma characterized by intention to harm is associated with children’s reports of psychotic symptoms. Clinicians working with children who report early symptoms of psychosis should inquire about traumatic events such as maltreatment and bullying."
AIP


“These findings indicate that childhood adversity is strongly associated with increased risk for psychosis.”

Treating Trauma in Psychosis

- “Between 50 and 98 percent of the adults with a Severe Mental Illness (SMI) such as psychosis had at least one traumatizing experience, with an average of 3.5 traumatic incidents per person.”

- “The results of cognitive behavioral therapy in people with psychosis shows that most of the time the voices continue after [CBT], but that the patient experiences less distress, is less involved with the voices and has learned to be indifferent to the content of the voices.”

- “It is notable that not only posttraumatic stress disorder symptoms improved after eye movement desensitization and reprocessing, but also depression and anxiety diminished and when present at baseline also delusions and hallucinations improved.”

- “No significant effect on feelings of hopelessness (BHS) and paranoid ideation as measured with the GPTS.”

Van den Berg & van der Gaag, 2012

AIP Implications

- Trace the various symptoms/manifestations, such as paranoid thoughts and various delusions, to the wide range of adverse life experience that would not constitute PTSD.

- In the full EMDR therapy protocol, the Float Back and Affect Scan techniques are used to trace current symptoms to events that often do not show up through direct questioning and would not be the criterion A events needed to diagnose PTSD.

- Comprehensive EMDR therapy would address all aspects of the clinical picture.
Family Experiences in Childhood Scale
Personality Disorders Findings

- 64.6% reported that no matter how hard they tried to do things right, it was never enough for their family.
- 66.7% reported lack of affection (no hugs or physical affection).
- 54.2% reports that their family hardly ever showed them they loved them (14.6% never).
- 43.7% reported knowing that they were loved by their family but that they had so many problems that they couldn’t take care of them.
- 59.2% reported hardly being praised when they did things right.
- 55.2% reported being reprimanded for almost anything.

Mosquera & González, 2012

Family Experiences in Childhood Scale
Personality Disorders Findings

- 66% reported that frequently there were so many things going on in their home, that they tried to be invisible.
- 47.9% reported being called useless, stupid, lazy or things like that frequently (of these, 27.1% reported that this happened all the time).
- Only 18% reported not being hit after doing something wrong.
- 72.3% reported frequent shouting at home.
- 81.3% reported never or hardly ever speaking about feelings openly.
- 58.3% reported that their family frequently made them feel ridiculous when they (child) expressed their thoughts or emotions.

Mosquera & González, 2012

Exposure Therapy

- “[W]hile meta-analyses clearly show that exposure-based treatments for anxiety disorders are more effective than either wait-list or attention placebo controls . . . or active treatment comparisons . . . a substantial number of patients fail to achieve clinically significant improvement. Although rates vary by the way responder status is operationalized, and the range is wide, the mean nonresponse rate is a full 50% at post-CBT and 49% at follow-up, in studies published since 2000 for anxiety disorders . . . In other words, almost one half of patients remain symptomatic.”

Dental Phobia

- Randomized controlled trial
- EMDR therapy compared to waitlist
- 13 in the EMDR therapy v 11 in Waitlist
- After wait period the second group was given EMDR therapy and the outcomes were combined

Doering et al., 2011
EMDR Conference, Vienna

Effect Sizes

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<tr>
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<th>EMDR</th>
<th>Waitlist</th>
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<tr>
<td>Dental Anxiety Scale</td>
<td>2.96</td>
<td>0.12</td>
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<tr>
<td>Dental Fear Survey</td>
<td>2.04</td>
<td>0.29</td>
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- At 12-month follow-up 83.3% were in regular dental treatment
- Effect size for dental avoidance was 3.20
- Meta-analysis of CBT treatment: ES of 1.8 for self-reported dental anxiety and 1.4 for attendance at dental visits after psychotherapy

Doering et al., 2011

Panic Disorder

Randomized Controlled Study
EMDR v CBT

- 24 total sessions.
- Combination of both the phobia and the three pronged protocol.
- All 8 phases were used
- Reprocessing of targets (Phase 3):
  - Past events:
    - Background stressors to first panic attack(s) (if any were identified)
    - First panic attack
    - Worst panic attack
    - Most recent panic attack

E-mail: e.faretta@piiec.com
Faretta, 2012
**METHODS AND TOOLS:**
**THERAPEUTIC PLAN EMDR v CBT**

- Past targets
  - Contributory childhood experiences of perceived abandonment, misattunement, humiliation, fear, and early parent-child reversals.
  - A death, a separation, or some situations where the patient believed to be going to die (for example by suffocation).

- Current stimuli
  - External cues associated with panic attacks
  - Internal (interoceptive) cues

- Future templates (for external and internal cues)
  - Re-evaluation and further reprocessing.

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**METHODS AND TOOLS:**
**THERAPEUTIC PLAN EMDR v CBT**

- Therapeutic plan of CBT group: the specific guidelines for Panic Disorder (NICE) were followed

- The protocol is made up of an assessment stage, psychoeducation on panic and on CBT; the use of breathing and relaxation techniques, imaginal exposure and in vivo exposure and lastly generalization and prevention of any relapses.

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**METHODS AND TOOLS:**
**EVALUATION TOOLS**

- State Trait Anxiety Inventory (STAI- Y1);
- Panic Attack and Anticipatory Anxiety Scales (PASS);
- Marks-Sheehan Phobia Scale (MSPS);
- Disability Scale (DISS);
- Self-Report Symptom Inventory - Revised (SCL-90-R).

DSM-IV-TR criteria have been used to formulate a diagnosis.
Bipolar Disorder Treatment

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<th>Traumas:</th>
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<td>- Witness of physical aggression</td>
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<td>- Physical aggression</td>
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<tr>
<td>- Sexual abuse</td>
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<tr>
<td>- Kidnapping</td>
</tr>
<tr>
<td>- Robbery</td>
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<tr>
<td>- Sudden death of family member</td>
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<td>- Accidents</td>
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<th>EMDR therapy:</th>
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<tr>
<td>13-18 sessions</td>
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<td>Standard protocol successful without modification</td>
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Drop outs (3 after baseline/2 after visit 4):

1 DES>25
2x withdrawal of informed consent
1 withdrawn after intervention EMDR due to new trauma
1 withdrawal informed consent after visit 4

Amann, EMDR Europe

Neuroanatomical Changes After EMDR Therapy

- Changes in hippocampal volume (Bossini et al., 2012)
- Neurobiological Correlates (Pagani et al., in press, PLoS ONE)

Neurobiological correlates of EMDR monitoring – An EEG study

Pagani et al. (in press). PLoS One

EEG readings pre/post and during EMDR therapy sessions and in comparisons with controls

Conclusions: The ground-breaking methodology enabled our study to image for the first time the specific activations associated with the therapeutic actions typical of EMDR protocol. The findings suggest that traumatic events are processed at cognitive level following successful EMDR therapy, thus supporting the evidence of distinct neurobiological patterns of brain activations during BS associated with a significant relief from negative emotional experiences.
“According to the Adaptive Information Processing theory when a traumatic event occurs, information processing may be incomplete, probably due to the fact that strong negative feelings or neurobiological reactions interfere with it. This prevents the forging of associative connections of memory with other networks and memory is dysfunctionally stored.”

“The pathophysiological mechanism of the therapy might be related to the slowing of the depolarization rate of neurons in the limbic system elicited by BS. This in turn would result in the emotional memories pathologically confined in the amygdale moving to higher brain centers and being fully processed. At macroscopic level, our findings (hyperactivation of parahippocampal gyrus and limbic cortices at T0 in both BS and script listening) seem to support such hypothesis . . . ”

Conclusions Our findings point to a highly significant activation shift following EMDR therapy from limbic regions with high emotional valence to cortical regions with higher cognitive and associative valence. This suggests a strong neurobiological rationale of EMDR, thus supporting its efficacy as an evidence-based treatment for trauma.

(Pagani et al., in press)

Eye Movement Research

• In the past decade approximately two-dozen RCT have demonstrated positive effects when evaluated in isolation.
• More than ten RCT demonstrate that the eye movements decrease emotion and/or imagery vividness compared to exposure-only conditions.
• Another ten RCT report a variety of memory effects, including increased episodic retrieval, attentional flexibility and recognition of true information.
• Two dominant theories:
  • Disruption of working memory
  • Orienting response/REM
• Working memory theory explains decrease in imagery vividness and emotion.
• The OR/REM theory explains the above and other memory phenomena.
• Both are relevant and most likely interact during processing.

Complex PTSD

• The length of Phase 1 varies and depends on a number of factors including age of trauma onset, duration and intensity of trauma exposure, and capacity for affect tolerance and regulation. Trauma history does not always predict the extent of time needed for stabilization. Many complex trauma victims have had the benefit of positive life experiences, including reparative, secure attachments, and as a result, require only a relatively short stabilization phase.
Complex PTSD

- Assessment of stabilization should be a primary factor, particularly regarding the attainment of sufficient affect regulation to move to Phase 2. In some cases, stabilization can best be achieved by processing the traumatic memories that contain a “volcano” of disturbing affects that continue to be triggered in the present.

- The therapist addresses the client’s fears about emotion, teaching the client about emotions, and actively practicing emotion modulation and regulation with the client in the context of the therapeutic relationship. Skills training typically include an emphasis on state change techniques, and mindful self-attunement.

- If there is sufficient affect regulation and utilization of self-help modulation techniques to maintain client stability during and between sessions, treatment proceeds to Phase 2

- Phase 2 work can commence when clients are able to demonstrate: (1) the ability to access positive and adaptive experiences; (2) the ability to regulate and tolerate affect, including appropriate use of self and dyadic regulation within and outside of session; (3) the ability remain grounded in the present and in contact with the therapist when focusing on the past; and (4) the effective use of support systems.

Combat Trauma

- Successive day EMDR therapy treatment for both veterans and active duty military is proving successful.

- EMDR therapy sessions are administered twice daily

- Treatment is complete in 1-2 weeks

- Treatment can also be given weekly, twice weekly or whenever schedules permit

- Complete processing of past/present/future