EMDR vs. fluoxetine vs. placebo
R01MH58363
Bessel van der Kolk MD
Joseph Spinazzola PhD
James Hopper PhD
Margaret Blaustein, PhD
Elisabeth Hopper PhD
Deborah Korn PhD
Jose Hidalgo MD
William Simpson PhD
Jellica Markovic, Jeff Weir, Deborah Rozelle, Caren Swill,
Miriam Kissin, Dan Siskind

EMDR vs. fluoxetine vs. Placebo

CAPS Scores pre-treatment, Post treatment (12 wks),
2 month Follow-up and 6 month follow up

Autonomic arousal following onset of eye movements,
Sack et al, 2008
Comparison EMDR vs Prozac (van der Kolk et al. 2007) and CBT vs PFT (Schnurr et al. 2007)
When trauma processing?

When a particular memory precipitates overwhelming hyper or hyparousal

EMDR is a Trauma Processing therapy

Drugs to help with trauma processing?
How do kids process traumatic experiences?

That depends on the quality of their attachment relationships
Trauma impacts differently depending on developmental stage

Freedman, Kaplan & Sadock's
Comprehensive Textbook of Psychiatry, II, 1975

Incest in the United States: one out of 1.1 million women

There is little agreement about the role of father-daughter incest as a source of serious subsequent psychopathology.

The father-daughter liaison satisfies instinctual drives in a setting where mutual alliance with an omnipotent adult condones the transgression... The act offers an opportunity to test in reality an infantile fantasy whose consequences are found to be gratifying and pleasurable.... such incestuous activity diminishes the subject's chance of psychosis and allows for a better adjustment to the external world.

The vast majority were none the worse for the experience.
<table>
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<tr>
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<td>RA:RO ratio</td>
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<td>2.0</td>
<td>0.65</td>
<td>12</td>
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**Trauma IS RESPONSE FORM THE ENTIRE ORGANISM.**

How do you take a trauma history?
TRAUMATIC ANTECEDENTS QUESTIONNAIRE I

I. Demographics
   - current household composition, occupation, etc.
   - who do you rely on for practical help
   - who do you rely on for emotional help

II. Current Health

III. Family of origin demographics
   - who in your family was affectionate with you
   - who recognized you as a special person
   - was there anyone you felt safe with growing up?

IV. Childhood caretakers and separations

Herman and van der Kolk

TRAUMATIC ANTECEDENTS QUESTIONNAIRE II

V. Peer relationships and childhood strength

VI. Family Alcoholism

VII. Family discipline and conflict resolution
   - who made the rules and enforced discipline at home
   - description of family rules
   - usual ways of disciplining children: scolding, withholding privileges, spanking, verbal abuse, hitting, hitting with objects
   - usual way parents solved disagreements: never angry, talking, yelling, threatening to hit, breaking and throwing, hitting

VIII. Early sexual experiences

Findings:
Childhood trauma and borderline personality disorder.
Herman, van der Kolk & Perry, 1989

- 87% of subjects with BPD had histories of severe childhood abuse and/or neglect starting prior to age 7.
- Other Personality Disorders did not have significant relations to childhood abuse and neglect.
Van der Kolk, Herman & Perry
Childhood trauma and self-destructive behavior
Am J Psychiat 1991


### ACE Study

- **Emotional abuse 10.6**
  1. Often or very often swear at you, insult you, or put you down?
  2. Sometimes, often, or very often act in a way that made you feel that you might be physically hurt?

- **Physical abuse 28.3**
  1. Often or very often push, grab, slap, or throw something at you?
  2. Often or very often hit you so hard that you had marks or were injured?

- **Sexual abuse 20.7**
  1. Touch or fondle you in a sexual way?
  2. Have you touch their body in a sexual way?
  3. Attempt oral, anal, or vaginal intercourse with you?
  4. Actually have oral, anal, or vaginal intercourse with you?

- **Substance abuse 26.9**
  1. Live with anyone who was a problem drinker or alcoholic?
  2. Live with anyone who used street drugs?

- **Mental illness 19.4**
  1. Was a household member depressed or mentally ill?
  2. Did a household member attempt suicide?

- **Mother treated violently 12.7**
  1. Sometimes, often, or very often pushed, grabbed, slapped, or had something thrown at her?
  2. Sometimes, often, or very often kicked, bitten, hit with a

---

**Effects of Child Maltreatment on Health**

Cumulative ACES & Impaired Worker Performance

Impact of Cumulative ACES & Social Dysfunction

- Lower educational, occupational attainment.
- Increased social service costs.
- Increased medical costs.
- Shortened life span.
- Increased risk for HIV, teen pregnancy, maternal depression.
- Intergenerational transmission of ACES to offspring.

Synergy between ACES & Other Adversities (e.g., Environmental Pollution)

- Childhood asthma disproportionately affects lower income communities where air pollution & ACES may be elevated.
- Correcting for potential confounders – researchers found an increased risk between traffic-related air pollution and asthma (OR = 1.63, CI=1.14-2.33) solely among children exposed to violence.
- ACES likely interact synergistically with many environmental pollutants and negative social experiences to increase risk for many costly illnesses.
Pervasive problems
More than 50% with ACE scores of 4 or higher had learning or behavioral problems in school, (cf. 3 % of those with a score of zero.
Children do not “outgrow” the effects of their early experiences.
High ACE scores correlated with higher workplace absenteeism, financial problems, pain medications, antidepressants, anti psychotics, and lower lifetime income.
Felitti: “Traumatic experiences are often lost in time and concealed by shame, secrecy, and social taboo”

<table>
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<th>Mental Health:</th>
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<td>Current depression</td>
<td>54%</td>
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<td>Suicide attempt</td>
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<table>
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<th>Drug Abuse:</th>
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<td>Alcoholism</td>
<td>65%</td>
</tr>
<tr>
<td>Drug abuse</td>
<td>50%</td>
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<td>IV drug abuse</td>
<td>78%</td>
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<table>
<thead>
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<th>Crime Victim:</th>
<th></th>
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<tbody>
<tr>
<td>Sexual assault</td>
<td>62%</td>
</tr>
<tr>
<td>Domestic violence</td>
<td>52%</td>
</tr>
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</table>

*Based upon the prevalence of one or more ACEs (62%) and the adjusted odds ratio of ACE.
And what happens in the brain?

- Basic housekeeping: Arousal, Sleep, Breathing, Chemical balance
- Planning, anticipation, use of time, cognitive functions, empathic understanding
- Perception, emotional valence, categorization, memory of references, relation between the organism and its surroundings
- Inhibition of inappropriate actions, empathic understanding
- Sense of time, context
1) Orbitofrontal cortex. Inhibits inappropriate action; helps postpone reward seeking.

2) Dorsolateral prefrontal cortex. Here things are “held in mind” and manipulated to form plans and concepts. Helps set priorities.

3) Ventromedial Prefrontal cortex. Here Emotions are registered and meaning bestowed on perceptions.

4) Anterior cingulate. Helps focus Attention. Integrates cognition and affect. Tunes into thoughts; Awareness of “self”

Heart Rate Variability (HRV)

Mezzacappa et al, 2001
What changes in the brain as a result of trauma?

1. Speechless terror

TRAUMA SCRIPT II.

You are in the hospital emergency room lying on a stretcher, but feeling as if you were standing on its head. You hear doctors’ words echoing, asking if you are pregnant. You try hard to understand, but just can't remember. Your little boy is talking to someone in another room, but you don't hear Katie.

When the doctor comes in, you know something is wrong. He tells you you have been in an accident. Your heart skips a beat, and you feel sweaty and nauseous. Then you hear him say: 'we could not do anything for your little girl. She is dead.' Your body feels heavy and you start to cry.

De-activation of Left hemisphere

Imprint of trauma on Right

Left anterior prefrontal cortex (Broca's area) goes off-line (speechless terror, dumbfounded)
Rigidly stuck in the past
b/c thalamus (sensory integration) & Dorsolateral Prefrontal Cortex (timekeeper) off-line

Dissociation/numbing: parasympathetic shutdown

Overcoming trauma

1. Effective action
Taking action.

• Stress hormones are meant to give us the strength and endurance to respond to extraordinary conditions.
• People who actively do something to deal with a disaster—rescuing loved ones or strangers, transporting people to a hospital, being part of a medical team, pitching tents or cooking meals—utilize their stress hormones for their proper purpose, and therefore are at much lower risk of becoming traumatized.

Stress hormones

• Helplessness and immobilization keep people from utilizing their stress hormones to defend themselves.
• Their hormones still are being pumped out, but the actions they’re supposed to fuel can’t take place.
• Eventually, the activation patterns are turned back against the organism, and now keep fueling inappropriate fight/flight and freeze responses.
• In order to return to proper functioning this persistent emergency response must come to an end. The body needs to be restored to a baseline state of safety and relaxation from which it can mobilized to take action if it is once again confronted with real danger.
Overcoming trauma

1. Effective action
2. Dealing with affect regulation
3. Accessing the emotional brain-
   knowing one’s self
Pre-post changes in MBSR group
(compared to waitlist control group)

Pre-post changes

Anterior cingulate cortex
p = 0.007, ROI corrected

Insula
Conveys bodily states to the brain
Controls (n=16): Positive Correlation

PTSD (n=16): Positive Correlation

A brief excursion into the history of the British empire

Charles Darwin 1809 - 1882

“Man and animals... all have the same senses, intuition, sensation, passions, affections and emotions.”

Behaviors to avoid or escape from danger have clearly evolved to render each organism competitive in terms of survival. But inappropriately prolonged escape or avoidance behavior would put the animal at a disadvantage in that successful species preservation demands reproduction which, in turn, depends upon feeding, shelter and mating activities all of which are reciprocals of avoidance and escape.
Darwin: The goal of emotion

The goal of emotion... is to effect physical movement and regain a state of physical equilibrium:

"the ... liberated nerve-force ... produces in us the state we call feeling, [which] must expend and liberate itself in intense sensations, active thought, violent movements, or increased activity of the glands.

The “pneumogastric nerve”
Vagus – cranial nerve X

Charles Darwin (1872):

*The Expression of Emotions in Man and Animals*

Heart, guts and brain communicate intimately via the "pneumogastric" nerve, the critical nerve involved in the expression and management of emotions in both humans and animals. When the mind is strongly excited, it instantly affects the state of the viscera.
Interceptive, body-oriented therapies can directly confront a core clinical issue in PTSD. Traumatized individuals are prone to experience the present with physical sensations and emotions associated with the past. If past experience is embodied in current physiological states and action tendencies and the trauma is reenacted in breath, gestures, sensory perceptions, movement, emotion and thought, therapy may be most effective if it facilitates self-awareness and self-regulation.

Predictors of Adolescent Dissociative Symptoms
(Hierarchical Linear Regression)

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<th>Step</th>
<th>Factors Evaluated</th>
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<th>p</th>
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<tr>
<td></td>
<td>• Gender</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Cumulative Demographic Risk</td>
<td></td>
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</tr>
<tr>
<td>2</td>
<td>Quality of Early Maternal Care</td>
<td>8.30</td>
<td>.00*</td>
<td>39%</td>
</tr>
<tr>
<td></td>
<td>• Verbal Engagement at Home</td>
<td></td>
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<tr>
<td></td>
<td>• Emotional/Physical Withdrawal at Home</td>
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<td></td>
<td>• Disrupted Maternal Communication in the Laboratory</td>
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<tr>
<td>3</td>
<td>Child Behavioral Problems</td>
<td>.01</td>
<td>n.s.</td>
<td>0%</td>
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<td></td>
<td>• Teacher Report, 7 year</td>
<td></td>
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<tr>
<td>4</td>
<td>Maternal Psychopathology</td>
<td>1.71</td>
<td>n.s.</td>
<td>3%</td>
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<td>• Dissociative Symptoms, 19 year</td>
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Disorganized attachment, not abuse, predicts BPD

1. Severity of abuse does not mediate the effect of early maternal withdrawal on later borderline symptoms.
Dorsolateral PFC and Thalamus deactivated

Loss of sense of time - past, present, future. Stuck in timeless re-living
Lack of integration leads to remembering in sensory fragments

Trauma Impacts Key Structures Underlying Emotional Regulation

How do kids process traumatic experiences?
That depends on the quality of their attachment relationships
Heart Rate Variability (HRV)

Images of Relative Health: Multiple Oscillators of an Excluded Subject
Images of Dysregulation: Constraint Can Lead to Over-Reactions

Baseline HRV

Second Trauma Event

High HRV

- Coherence
  - McCraty et al., 1995 Am. J. Card
- Positive emotions
  - McCraty et al., 2001 Bio. Psychol
- Predicts resistance to stress
  - Porges et al., 1996 Dev. Psychobiology
  - Katz & Gottman, 1997 J.Clin Child Psychol

Low HRV

- Anxiety and depression
  - McCraty et al., 2001 Bio. Psychol
- Predictor of mortality: Heart disease, cancer, etc.
  - Tsuji et al., 1994 Circulation; Dekker et al., 1997 Am. J. Epidemiol.; La Rovere et al., 1998, Lancet
Prayer / Mantras

FreezeFramer® 2.0

Master the Power of the Heart
Freeze-Framer® 2.0
A Change of Heart Changes Everything
SEE in real time how thoughts and emotions affect your heart rhythms
DISCOVER your personal stress triggers and eliminate them
BALANCE your emotions, mind and body quickly
CONVERT “stress lockdown” into “free energy” for creativity, productivity and learning
STAY in “The Zone” for optimal health, performance, and personal fulfillment

How we restore these broken neural pathways?

- Effective action (e.g. boxing, martial arts)
- Being in touch with/befriending one’s self
  (e.g. yoga, meditation, chi qong, tai chi)
- Being able to tell the truth, no more secrets
- Sensory integration
- Rewiring neural pathways with neurofeedback
Trauma is not a story about something that happened long ago

Being traumatized means that the emotions and physical sensations, the imprints (including images) of the trauma on the mind and brain, continue to be experienced in the present, not as memories, but as disruptive physical and emotional reactions.

Trauma vs. disorganized attachment

Problems resulting from disorganized and insecure attachment need a different approach than problems that result from discrete traumatic experiences, such as accidents or assaults.

The focus of treatment of distinct traumas is to access, tolerate and process the memories of that event (e.g. EMDR).

The problems that result from disorganized attachment require interventions that target emotion regulation and self-leadership (e.g. language & relationship; IFS, yoga & neurofeedback)

Components of trauma treatment

(1) finding a way to become calm and focused,

(2) learning to maintain that calm in response to images, thoughts, sounds or physical sensations that remind you of the past,

(3) finding a way to be fully alive in the present and engaged with the people around you,

(4) not having to keep secrets from yourself, including secrets about the ways that you have managed to survive.
• Before re-activating horrible memories it’s critical to find ways to cope with the sensations and emotions that keep threatening to overwhelm you.

The engines of posttraumatic reactions are located in the emotional brain

• The emotional brain hijacks the rational self,
• The emotional brain manifests itself in physical reactions: heart pounding, breathing becoming fast and shallow, speaking with an uptight and reedy voice, and the characteristic body movements that signify collapse, rigidity, rage, or defensiveness.

• In response to the damage, embarrassment and humiliation caused by this hormonal onslaught, you go on the defense:
  • you try to squelch your overwhelming emotions by numbing yourself out in front of screen, or by drugging, drinking, and other self-destructive behaviors;
  • eventually receptor sites for hormones are shut down and neural pathways in the brain change.
Fundamental treatment issue:

- How can we restore the proper balance between our rational and emotional brains, so we can be in charge of how we conduct our lives, maintain a full range of emotions to help us feel engaged, motivated, and connected, and simultaneously protect ourselves from danger?

- The rational brain cannot abolish emotions, sensations or thoughts (such as living with a low-level sense of threat, or feeling that you are fundamentally a terrible person, even though you rationally know that you are not to blame for having been raped):
  - Understanding why you feel a certain way does not necessarily change how you feel.
  - But it can keep you from surrendering to intense reactions (for example, assaulting the boss who reminds you of a perpetrator, breaking up with a lover at your first disagreement, or jumping into the arms of a stranger).

Limbic system therapy

- Goal: to return the emotional brain its ordinary job of being a quiet background presence that takes care of the housekeeping of the body, ensuring that you eat, sleep, connect with intimate partners, protect your children, and defend against danger.
- Recovery means repairing the faulty alarm systems, so you can experience yourself as competent, capable and alert, instead of feeling helpless, cursed and defective.
Befriending the Emotional Brain

1. Dealing with hyperarousal.
2. No mind without mindfulness
3. Relationships
4: Becoming synchronized.
5: Getting in Touch.
6. Taking action.
7. Integrating traumatic memories.

The pleasure of completed action

• When patients can tolerate being aware of their trauma-based physical experiences they are likely to discover physical impulses, like hitting, pushing, or running, that they wanted to make during the trauma, but that they held back for the sake of survival.
• These impulses manifest themselves in subtle body movements, such as twisting, turning, or backing away.
• Amplifying these physical impulses and experimenting with ways to modify them begins the process of bringing the incomplete trauma-related "action tendencies" to completion and can eventually lead to resolution of the trauma.
• Somatic therapies can help patients to re-position themselves in the present by experiencing that it is safe to move. Feeling the pleasure of effectively taking action restores a sense of agency and the sense that you can actively defend and protect yourself.
Being attuned provides a visceral experience of reciprocity.

When we play together we feel physically attuned and experience a sense of connection and joy.

Improvisation exercises (http://learnimprov.com/) tango dancing, singing in a choir & playing volleyball all help people connect in joy and exploration.

Parent-Child Interaction Therapy (PCIT) SMART (Sensory Motor Arousal Regulation Treatment).

The moment you see a group of grim faced people break out in a giggle you know that the spell of misery has broken.
- Hate, anger, love, and hope are not "psychological states" existing in some "mental" vacuum;
- They are somatic states that exist in the entirety of our living system.
- To change these habitual action patterns one has to change these states.

Traumatized people need to have physical & sensory experiences to:

- Unlock their bodies.
- Activate effective flight/fight
- Tolerate their sensations.
- Befriend their inner experiences
- Cultivate new action patterns.

Overcoming trauma

1. Effective action
2. Dealing with affect regulation
Dealing with hyperarousal

- We have inbuilt self-regulation mechanisms for self-regulation
- 80% of the fibers of the vagus nerve run from the body into the brain.
- We can directly train our arousal system by the way we breathe, chant and move, and thus achieve a measure of control over our emotional brains.
- HRV training
- Yoga
- Neurofeedback
Does yoga change HRV in Normals?

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<th>dbt pre</th>
<th>yoga pre</th>
<th>dbt post</th>
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<td>Mean</td>
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<td>SD</td>
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<tr>
<td>95% CI</td>
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F: 2.47
P value: 0.052

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yoga versus dbt
Yoga for PTSD

Clinician Administered PTSD Scale (CAPS)

From: Clinical implications of neuroscience research in PTSD. van der Kolk BA,

Table 5: Clinician Administered Three Assessment Occasions

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pre-Treatment</th>
<th>Post-Treatment</th>
<th>Pre-Post Change</th>
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<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>Δ (t)</td>
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<tr>
<td>Total CAPS severity</td>
<td>73.64 (25.83)</td>
<td>49.48 (25.15)</td>
<td>24.15 *** (-1.00)</td>
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<td>Control</td>
<td>76.02 (27.93)</td>
<td>63.48 (23.40)</td>
<td>12.54 *** (-2.00)</td>
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<td></td>
<td>-13.17</td>
<td>-16.33 *</td>
<td>-3.17</td>
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<tr>
<td>Des</td>
<td>16.80</td>
<td>14.11 (10.82)</td>
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<tr>
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<td>16.66 (13.65)</td>
<td>16.76 (14.96)</td>
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<td></td>
<td>2.33</td>
<td>2.63</td>
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<tr>
<td>IAS-Tri</td>
<td>73.65</td>
<td>67.77 (15.32)</td>
<td>-6.48 * (-1.44)</td>
</tr>
<tr>
<td>Control</td>
<td>77.59 (12.81)</td>
<td>68.01 (17.17)</td>
<td>-9.54</td>
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<td>75.50 (13.49)</td>
<td>69.49 (14.25)</td>
<td>-6.00</td>
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<tr>
<td></td>
<td>-1.00 *</td>
<td>-1.50 *</td>
<td></td>
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</table>

*p < .05, **p < .01, ***p < .001. M = mean; SD = Standard Deviation; t = unstandardized regression coefficient; Δ = change; Δt = Cohen’s D; CAPS = Clinician Administered PTSD Scale; Δt = Descriptive.

Table 5: Clinician Administered Three Assessment Occasions

<table>
<thead>
<tr>
<th>Measure</th>
<th>Pre-Treatment</th>
<th>Mid-Treatment</th>
<th>Post-Treatment</th>
<th>Linear Change</th>
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<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>M (SD)</td>
<td>Δ (t)</td>
<td>Δ (t)</td>
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<tr>
<td>OTS</td>
<td>61.17 (23.40)</td>
<td>61.59 (23.39)</td>
<td>54.59 (24.83)</td>
<td>-6.59 * (-1.00)</td>
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<tr>
<td>Control</td>
<td>70.86 (25.86)</td>
<td>65.06 (23.44)</td>
<td>63.17 (25.83)</td>
<td>-7.70 * (-1.50)</td>
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</tr>
<tr>
<td></td>
<td>-13.17</td>
<td>-16.33 *</td>
<td>-3.17</td>
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<tr>
<td>BOA</td>
<td>73.90 (11.73)</td>
<td>79.21 (11.89)</td>
<td>73.47 (11.91)</td>
<td>-0.75</td>
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<tr>
<td>Control</td>
<td>74.90 (11.47)</td>
<td>79.13 (11.05)</td>
<td>74.77 (11.91)</td>
<td>-0.75</td>
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<td></td>
<td>2.25</td>
<td>2.44</td>
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*p < .05, **p < .01, ***p < .001. M = mean; SD = Standard Deviation; t = unstandardized regression coefficient; Δ = change; Δt = Cohen’s D; OTS = Obsessive-Compulsive Scale; BOA = Beck Obsessive Inventory II.
Qualitative

- Having grown up obese and self-conscious it was wonderful to be able to move gently
- I felt much more in touch with my body
- I learned to be able to focus and sense where my body was
- I was able to go shopping and know what I needed.
- I felt stronger and more balanced
- Connecting with my body
- Learning to focus
- I have always hated my body and I learned how to take care of it

“Yoga is about looking inward, instead of outward, and listening to my body. A lot of my survival has been geared around never doing those things”. “I have been refusing to listen to my body, which is such an important part of who I am. w. I am so disconnected from my body when I cut it”.

“In the yoga class I tried just noticing the sensations in my body and I noticed that when we did that pose where you thread one arm through the other and twist I felt like the pelvic part of my body was all there was to me”.

“I slowly learned to just have my feelings, without being hijacked by them”. “Life is more manageable: I am more attuned to my day and more present in the moment. I am more tolerant of physical touch”. “My husband and I are enjoying watching movies cuddled together in bed, a huge step. I finally can feel intimate with my husband”.

Figure 1. Change in Davidson Trauma Scale (DTS) as a Function of Group.
Overcoming trauma

1. Effective action
2. Dealing with affect regulation
3. Accessing the emotional brain—knowing one’s self
4. Dealing with parts
Internal Family Systems

- Across people, there are common patterns to the roles that parts are stuck in. This is because we are hurt in similar ways, and we have a limited number of ways to protect ourselves. Some parts are protecting the system and others are being protected by them.
- There are two kinds of protectors:
  - Managers
  - Firefighters
- The protected parts are called exiles because they seemed to be locked in inner dungeons, cave and basements.

Exercise: Getting to Know a Part

- **Purpose:** To help you have a brief experience of IFS.
- **Directions:**
  - Pick a part you would like to get to know better. Do not pick one you have highly extreme feelings about.
  - It could be a thought pattern, emotion, sensation, inner voice.
  - Focus on it and find it in your body.
  - Notice how you feel toward it.
  - If you feel anything besides curiosity or compassion, then find the parts giving you those other feelings and ask them to step back.
  - If they will not step back, just spend the time learning what they are afraid of.
  - If they will and you do feel at least curious, then get to know what the part wants you to know about itself.

How Parts Become Exiles: I. Through Wounding

- Were you ever humiliated, rejected, made to feel worthless or traumatized?
- What did you try to do with the emotions, memories, sensations and beliefs from those episodes?
- What did the people around you tell you to do with all that? Did it work?
- Were you forced to take care of one or both of your parents emotionally, organizationally, or sexually, or did you have to parent your siblings?
- If so, what parts did you have to push away in order to function in those roles?
- How did those parts feel?
  - You do not wind up locking away just memories and emotions, but also the parts that carry those emotions – the parts that were hurt the most by those experiences.
- Usually those are your most sensitive, creative, intimacy-loving, lively, playful and innocent parts.
- By exiling them when they get hurt, they suffer a double whammy – the insult of your rejection is added to their original injury.
How Parts Become Exiles: III. By Filling Holes in Family Roles

In many families, parents abdicate or are unable to fulfill their roles. As a result, children are sucked into the vacuum. Also, rifts in the parents’ marriage can terrify children and pull them into the role of:
- Distracting their parents.
- Alllying with one against another.
- Becoming a pseudo spouse or caretaker to one of them.
Whenever a child has to take on responsibilities for:
- Caring for other children.
- The family’s financial security.
- The parent’s marital problems.
- The well being of a parent.
The child’s managers have to take over and the child has to exile parts that feel frightened, needy and neglected.

Parts form a network of polarized and protective inner relationships with one another. Because of this network, it is very difficult for any one part to change without others changing first.

Created by trauma, i.e., fragments of the once unitary mind that was shattered – instead, trauma makes more extreme and polarized the pre-existing system of parts.
- What they first appear to be – that is just the role they were forced into and do not enjoy.
- Simply metaphors – they cannot be imagined or created. They have a powerful inner existence and should be treated as such.
- Unidimensional – they are not mere bundles of emotion or thought, but are full range personalities, i.e., the angry part is not just angry, but is often a teen who carries fear and pain, but is stuck in the role of the angry one.
- To be eliminated or even battled – instead, they are to be understood and appreciated.
- They quickly transform into something valuable once they feel understood and can unburden.

Managers

If exiles are hurt, they can break out and take over. Consequently, there are parts whose job it is to never let that happen.
- To protect our exiles and protect your system from them, these parts believe they have to manage your day-to-day life, and do so in such a way that nothing happens that could trigger the exile.
- These managers are like parentified children who have no trust in your ability to protect the system because you did not in the past.
- They are basically preemptive – trying to anticipate danger and control your external and internal environment to prevent the triggering of exiles.
- To control internally they can:
  - Hijack your senses to distort your perception so that you deny troubling events or see only what they want you to see.
  - Numb your sensations and make you disconnected from your feelings or distract you from them by keeping you obsessed with something else.
- It is important to remember that managers carry huge burdens of responsibility and are in over their heads. While you may resent their stifling or nagging, they deserve your appreciation and compassion.
To control your external world, managers are:
- The sentries that scan for danger.
- The thinkers who are constantly strategizing and solving problems.
- Inner critics who try to shame you into dieting, working hard, dressing well, impressing everyone, being perfect so you are never rejected and have power over others.
- Other inner critics or pessimists whose goal is to run down your confidence so you won’t take any risks and will not get hurt.
- Caretaking parts who get people to like and depend on them so you will not be abandoned.
- Worriers who flash worst-case scenarios in your mind to get you to stay safe.
- Censors who rehearse what you are about to say and stop you if you might offend.
Numbing parts that control how much emotion and sensation you feel.

What Happens When the Managers Don’t Succeed?
• Despite the managers’ best efforts, life will trigger your exiles. When that happens it is
• very scary, like there is an explosion inside and flames of emotion threaten to engulf you.

Exiled Parts Can Be Dangerous
• Because of being frozen in time during the trauma, and then locked away by you, your
  • exiles are often in very extreme states of despair, fear, shame, emptiness and neediness –
  • they are like love-starved children.
  • They think that the only way they can get any attention is to totally take over, so when given the chance, they do.
  • Clients will come in with stories of how bad it was in the past when an exile took over and how they never want to feel that way again.
• Consequently other parts think that the state their exiles are in is who they are, and resolve to keep them locked up.
• In addition, some exiles are especially dangerous because they carry an intense drive to be redeemed by the person who originally made them feel worthless, or someone who
  • resembles that person. As a result, they will keep making you open up to the wrong person who will keep hurting you.
• The point is that protectors have good reason to fear the exiles. Their fears should be respected and explored.
Firefighters

- Consequently you have another set of parts that immediately go into action to either put out the fire somehow or dissociate you from it—they try to douse the fire with a substance, pacify it by finding a person to redeem or comfort you, create alternative sensation to distract from it or find a way to get you out of your body so it burns itself out.

- Firefighters tend to be:
  - Frantic
  - Reactive
  - Impulsive
- Will use whatever means necessary because often they believe your life is at stake

What is your first impulse when one of your exiles is triggered?

- Do you binge on food, work, television, internet, shopping, sex, flirting, cigarettes, and fantasies?
- What might your clients do when one of their exiles triggered?
- When these do not work do their parts resort to more drastic measures—drugs, alcohol, suicidal thoughts, rage, self-mutilation, compulsive sex, affairs, stealing, sudden pains or illnesses?

Dynamics of the Internal Family

- Protectors do not trust your Self and do not let you lead.
- Each group is constrained from changing by the other groups.
- Managers cannot become less controlling for fear that exiles will be hurt or firefighters will take over.
- Firefighters cannot become less impulsive until they do not have to fight managers for their right to exist and until exiles are less vulnerable.
- Exiles remain exiled until managers and firefighters see some virtue in going to them rather than staying away.
- The solution to those constraints is to heal the exiles as soon as possible and then both sets of protectors can relax.
- The problem is that protectors do not want your Self anywhere near the exiles.
- Some common fears of protective parts about letting you close to exiles:
  - You will be overwhelmed by the exile’s emotion.
  - The exile cannot change so there is no point.
  - Anyone who sees the exile (including the therapist) will judge or abandon you.
  - The protectors will lose their job.
  - You will stir up the exiles which will trigger dangerous firefighters.
  - Your external life is not safe enough to be that vulnerable.
  - Exiles hold scary secrets.
- These and other fears need to be taken seriously and clearly addressed before permission will be granted to go to the exiles.

The Goals of IFS

- To help all your parts unburden and discover who they really are and what they want to do.
- To create a new network of harmonious relationships among your transformed parts.
- To help your parts know it is safe to let your Self embody and trust your Self to lead.
- To create more Self-to-Self relationships with other people.
- As all this happens:
  - There will be no more rigid managers, firefighters and exiles.
  - They will become many happy parts; some are playful children while others assist the Self in ways they enjoy; none are locked in rigid roles.
  - You will feel more integrated but you will still have parts.
  - Since they function harmoniously you will feel more unitary, like a flock of birds or school of fish.
  - The symptoms that were the result of their protectiveness, attempts to get your attention or to sabotage you, will disappear.
  - Things that used to trigger you in the external world will not bother you much.
  - You will find increasing clarity regarding what you are here to learn and to do.
- Thus, the goal is not to simply accept and learn to cope with extreme parts, the goal is transformation
Overcoming trauma

1. Effective action
2. Dealing with affect regulation
3. Accessing the emotional brain—
   knowing one’s self
4. Dealing with parts
5. Re-wiring neural circuits
   (neurofeedback)

Breakdown in cortical timing in PTSD

Clark, Egan, McFarlane, Morris, Weber,
Sonkkila, Marcino, Tochon-Danguy. (2000)
Human Brain Mapping. 9(1): 42-54

CONTROLS
PTSD

Values based on comparisons of
relative rCBF
with subject average
gCBF normalised to 50mL/100g/
min

ERP sources

Child’s Family Drawing at Beginning of
NF - 8/3/94
Many conditions result from problems with regulation of arousal.

The RATE of BRAINWAVE FIRING is related to our state of arousal.

[Diagram showing different brainwave states: Sleep, Druggy, Relaxed Focus, Relaxed Thought, Active Thinking, Excited.]

We tune the brain to move into this range to manage symptoms of depression, ADD, and improve brain activity.
12 Year old Somali refugee boy with serious impulse control and concentration problems, making classroom attendance impossible.

20 weeks of F3-F4 down training of frontal Δ, resulting in good adjustment.
Study Design:
• Randomized, waitlist-controlled trial of NF.
• Adults who had six or more months of trauma-focused therapy without significant clinical improvement.
• 24 Sessions of Biweekly NF versus Waitlist.

Study Sample
• Adults ages 18-68 years old
• Trauma history was obtained by self-report.
• Met DSM-IV criteria for PTSD per the Clinician Administered PTSD Scale (CAPS; citation).
• Exclusion: unstable medical condition; SSDI; pregnancy or breastfeeding; active suicide risk; psychotic or bipolar disorder; traumatic brain injury (TBI); history of seizures; current substance abuse; current and ongoing traumatic exposure Global Assessment of Functioning (GAF) score <40.

Measures
1. Traumatic Events Screening Inventory (TESI) 18-item self report measure assessing lifetime occurrence of acute and interpersonal trauma.
2. Clinician Administered PTSD Scale (CAPS), a 30-item clinician administered interview corresponding to DSM-IV-TR criteria for PTSD.
3. The Davidson Trauma Scale (DTS), a 17-item self-report measure of PTSD assessing the severity and frequency of PTSD symptoms.
**Sample**

- N = 44 adults (22 per group)
- ages 22-68 years of age
- Years of therapy:
- Traumatic Exposures:

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**The goal of treatment**

.. to strengthen the self: to widen the field of perception and enlarge its organization so it can appropriate fresh portions of “it”:

where “it” was, “I” shall come to be.

It is a work of culture - not unlike the draining of the Zuiderzee.

Freud, New Introductory lectures
Vol. XXII, p.80, 1932