Evidenced Based Approaches to Regulate Arousal & Integrate Traumatic Memories in Trauma Treatment

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CONFLICT OF INTEREST STATEMENT

I integrate theory, research and practice from multiple seminal resources on trauma for this webinar. I do not benefit financially from royalty payments from the sale of any books or resources and do not receive research funding or grant money for anything I mention in this webinar.

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1. Describe the three evidenced-based phases of trauma treatment.
2. Identify several signs of when clients are in a state of hyper-arousal or hypo-arousal.
3. Understand Polyvagal theory and how it applies to effective trauma treatment.
4. Explain the impact of traumatic stress on the brain and how traumatic memory is stored.
5. Know three research-informed adjunctive therapies that can help clients regulate arousal.
6. Identify culturally relevant information to find out from clients before trauma processing.
7. Explain factors in deciding which trauma processing model to use in trauma treatment.
8. Recognize three signs to know your client is 'done' with the trauma processing stage of trauma treatment.

LEARNING OBJECTIVES

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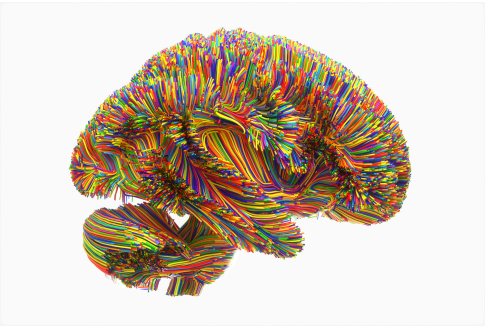
PRESENTATION OUTLINE

- **The PTSD Brain: The Impact of Traumatic Stress.**
- **Polyvagal Theory & The Value of the Therapeutic Relationship.**
  - Signs of Hyper-Arousal & Hypo-Arousal & Research Supported Interventions.
- **Three Phase Model for Trauma Treatment**
  - Why is a Phase Model Effective?
  - Phase 1: Stabilization
  - Three Adjunctive Therapies to Support Stabilization.
- **Phase 2: What is Trauma Processing**
  - What Every Trauma Clinician Should Know about Traumatic Memory.
- **Conceptualization & Trauma Processing Treatment Using:**
  - Prolonged Exposure
  - Cognitive Processing Therapy
  - EMDR
  - Internal Family Systems
- **Phase 3: Present Day**
  - How to Know When Your Client is 'Done' with Trauma Processing.
  - Indicators of Successful Trauma Processing.



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4 WAYS TRAUMATIC STRESS IMPACTS THE BRAIN

Triune Brain (MacLean, 1990): We have 3 brains in one brain that have progressed across evolution:

- Brain Stem (Reptilian)
- Limbic System (Emotional Brain)
- Pre-Frontal Cortex (Neo-cortex)

- Information Processing

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PTSD BRAIN: *BRAIN STEM*

Brain Stem (reptilian brain): awake/sleep/hunger/breathe becomes impaired:

- There is dysregulation of arousal modulation at brain stem level.
- Breathing becomes fast and shallow.
- Digestive problems, sleep disruption, eating/hunger
- The pons within the brainstem serves as a major relay center between the brain and the bladder (Malykhina, 2017).
- Impaired ability to modulate physiological arousal.
- Difficulty being aware of internal sensations and perceptions.
- Difficulty self-soothing and self-regulating due to higher level of sympathetic nervous system activation and lower heart rate variability (marker of flexibility in ANS).

(Courtois & Ford, 2009; 2016; van der Kolk, et al., 1996; van der Kolk, 2006; van der Kolk, 2014)

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PTSD BRAIN: *LIMBIC SYSTEM*

Limbic system: determines how you see things/what is our "reality"
- Am I Safe, Approach/Avoid, Pleasure

Amygdala: "smoke detector" of brain:
- Keeps firing when re-interpreting both minor stressful experiences and neutral stimuli as dangerous and in need of flight/fight/freeze or faint response.
- Difficulty figuring out what things mean.
- Brain is set to interpret things into danger, fear, fright and disruption.
- Hyperstimulated by body sensations, sounds, images and trauma reminders.

Hippocampus (organize storage and retrieval of memories – short-term to long-term):
- Information-processing process gets hijacked, so memories are not encoded with context.

(Courtois & Ford, 2009; 2016; van der Kolk, et al., 1996; van der Kolk, 2006; van der Kolk, 2014)

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TRAUMATIZED BRAIN: *FRONTAL LOBE*

Frontal Lobe: Executive functioning, ability to communicate, problem solve.
- Have difficulty filtering out irrelevant information
- Have difficulty keeping attention in present moment.
- Have a hard time taking in neutral current information:
  - Difficult to learn from experience. Impaired capacity to communicate experience in words.
  - Hard to take in new information into brain.
  - Blood flow to left prefrontal lobe can decrease → less ability to connect to language.
  - Blood flow to right prefrontal lobe can increase → increased irritability, anger, sadness.

(Courtois & Ford, 2009; 2016; van der Kolk, et al., 1996; van der Kolk, 2006; van der Kolk, 2014)

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IMPACT OF TRAUMATIC STRESS ON BRAIN: *INFORMATION PROCESSING*

In normal processing of experiences → information comes in and gets effectively 'metabolized'

- through our senses, limbic system (where it is interpreted)
- then connected with our pre-frontal cortex (executive functioning and where we can assimilate new experiences into existing memory networks and help us problem solve and guide future choices).

When trauma occurs → connection to pre-frontal cortex doesn't happen appropriately.

- Memory of trauma is stored in brain as highly charged raw sensorimotor data frozen in time.

(Courtois & Ford, 2009; 2016; van der Kolk, et al., 1996; 1998; 2006; van der Kolk, 2014)

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IMPACT OF TRAUMATIC STRESS ON OUR WINDOW OF TOLERANCE

"Window of Tolerance" – coined by Dr. Dan Siegel (1999) to describe brain/body's processes of emotional regulation.

Being in the window of tolerance:

- Can be present, attending to our own internal needs and demands of environment.
- Can still connect with others in meaningful way.
- Adapt to what is happening in present moment with attentiveness and calmness.
- If stress occurs, can manage, continue to breathe, positive self-talk,, etc.
- Can "ride the wave" of stress. Let things "roll off your back."

Being outside of the window of tolerance: Hyperarousal (upper limit) and Hypoarousal (lower limit)

Traumatic stress impacts one's window of tolerance. (Corrigan & Fisher, & Nutt., 2011; Courtois & Ford, 2009; 2016; Siegel, 1999)

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INDICATORS THAT A CLIENT HAS UNPROCESSED TRAUMA

PTSD: (Pless Kaiser et al,, 2019).

- not a static condition
- not experienced in the same way by people with PTSD
  - E.g. PTSD may be chronic and long-lasting for some people; while others may experience fluctuating PTSD symptoms across the lifespan (Chopra et al., 2016).
- Jumps time periods during intake or history taking.
- Has difficulty verbally describing trauma history (Petzold & Bunzeck, 2022)
- Trouble remembering aspects of everyday life (Pitts et al., 2022).
- Fear-related thoughts, feelings and behaviors (Bremner, 2006)

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HOW UNDERSTANDING THE NEUROBIOLOGY INFORMS TREATMENT PLANS

Neuroscience research supports that effective trauma recovery treatment includes:

- Learning to tolerate feelings and sensations.
- Learning to modulate arousal.
- Helping brain learning to be flexible by adapting to situation in present – ability to take in new information and learn from it.
- Learning to tolerate attending to internal experience.
- **Take Away: Organize your treatment plan around arousal regulation.**

- **Informs Phase-Oriented Trauma Recovery**
- **Informs Adjunctive Therapy in Stabilization stage of Trauma Recovery**

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CREATING TREATMENT PLANS FOCUSED ON AROUSAL REGULATION

- PTSD & the Nervous System
- Reading Your Client's Signals:
  - Signs Your Client is in Hyperarousal & Interventions that Help
  - Signs Your Client is in Hypoarousal & Interventions that Help
- Polyvagal Theory
- Emotional Attunement in Therapeutic Relationship

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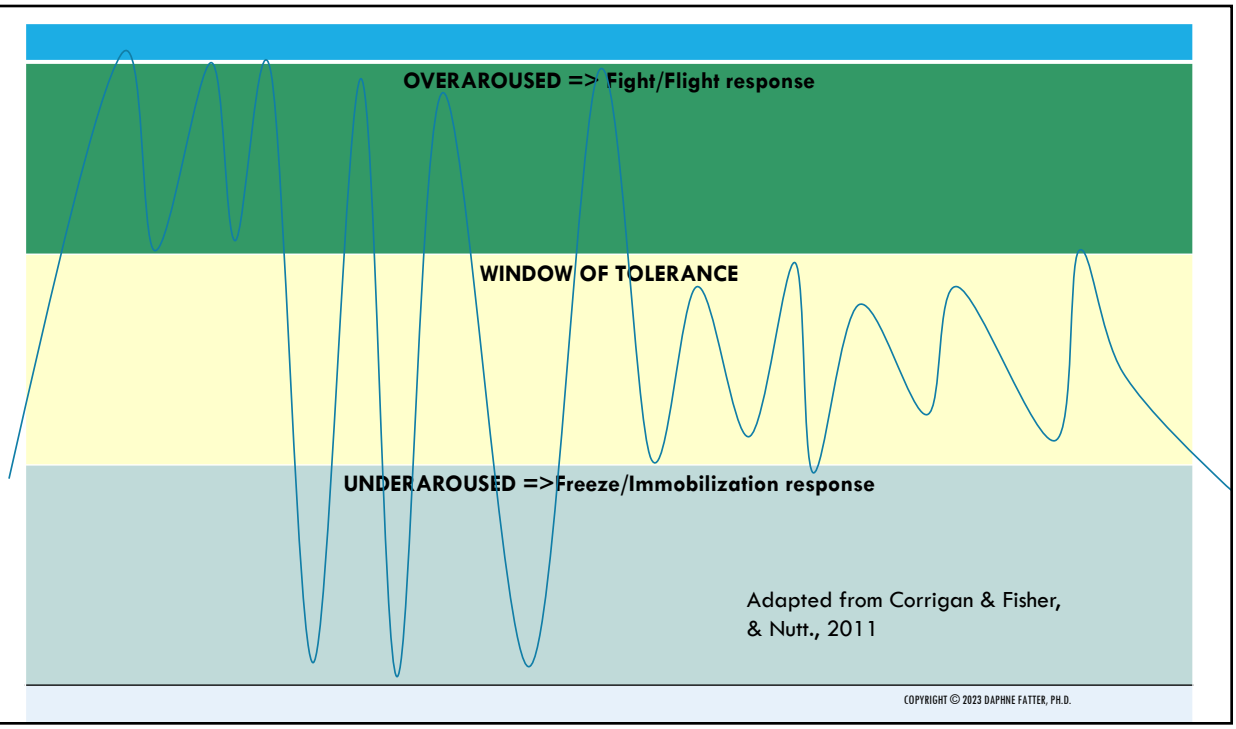

3 States of Autonomic Arousal

Social Engagement => Calm

- Optimal regulation: Emotions can be tolerated
- New information can be integrated/Learning
- Sense of self-control and balance
- Clarity; social communication
- Can "ride the wave" of stress

HYPERAROUSED => Fight/Flight response

- Anxiety, Panic
- Emotionally overwhelmed/dysregulated (Crying uncontrollable; Aggression/Rage)
- Cognitive processes can be diminished or disorganized
- Flooding, Intrusive/ruminative thoughts, Hypervigilance
- Flashbacks (emotional, somatic or visual in nature)
- Insomnia; More physical sensations (chronic pain, shaking/irritability)

HYPOAROUSED =>Freeze/Immobilization response

- Emotional numbing-"I feel nothing"; Dissociation; Depersonalization ("Is this real?")
- Shut down both emotionally and cognitively (Can't think; Can't feel; memory impaired)
- Less physical movement; Lack of sensation; dizzy; fainting
- Over compliance
- Withdrawal; Detachment

Signs of Optimal State- Window of Tolerance	[1] Porges, 2016 [2] Corrigan & Fisher, & Nutt., 2011; Courtois & Ford, 2009; 2016; Siegel, 1999. 3 Levine, 2018; [4] Ogden & Minton, 2000
Cognitive Signs	Optimal cognitive functioning[2] Can think & Feel at the same time[2,4] Can take in new information; can learn[1] Able to maintain present moment awareness
Emotional Signs	Able to tolerate feelings[2] Feeling safe[2] Experience empathy[2] Notice cues of others and oneself[1] Able to regulate emotions[1]
Physical Signs	More likely to be abdominally breathing[3]
Behavioral Signs	Voice is melodic[1] Social communication[1] Reactions are adaptive and can fit the situation at hand[2]

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WHAT IS THE VAGUS NERVE?

It is the 10th Cranial Nerve that regulates both the heart and the muscles of the face and head.

Keeps heart rate low via a vagal "brake" (inhibits sympathetic responses) to read social cues helping to facilitate social engagement.

When threat, vagal brake is released:

→Sympathetic nervous system response (less aware of others & social cues)

→ muscles of middle ear will attune auditory system to sounds of danger, rather than social communication.

(Porges, 1995; Porges, 2018)

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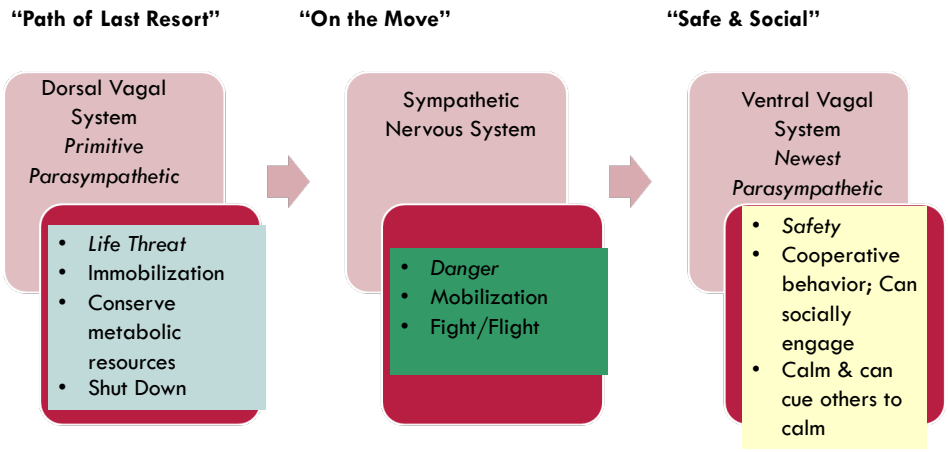
Polyvagal Theory – Evolution of Autonomic Nervous System



Adapted from Dana & Grant, 2018; Porges, 1995; Porges, 2018; Levine, 2018

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HOW DOES POLYVAGAL THEORY INFORM TRAUMA RECOVERY?

Autonomic states are hierarchically organized.

- Newer circuits have capacity to down regulate and inhibit defensive behaviors. When newer circuits don't work, use older and older circuits.
- Neuroception (automatic surveillance)– how the nervous system detects safety.

We are wired to connect: Engage the social engagement system to help inhibit other autonomic states.

- Clinicians can teach their clients signs of which of the three autonomic states they are in.
- Coping skills can be identified to help client move to the "Safe and social" calm state.

(Dana & Grant, 2018; Porges, 2018)

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THERAPEUTIC RELATIONSHIP AS MECHANISM OF CHANGE

- Polyvagal theory validates importance of therapist's ability to be
  - present to clients → Develop working alliance → help client's feel safe and secure in relationship (Geller, 2018).
- Research shows that therapeutic relationship as most consistent predictor of change (Geller, 2018; Norcross, 2011) and serve as both a mediator and/or moderator of change (Vilkin, Sullivan, & Goldfried, 2022).
  - The therapeutic alliance can be a moderator in couples therapy & crucial for the couple's relationship satisfaction (Wiggins, 2022).
- **Consistently be attuned and offer secure attachment base in therapeutic relationship.**

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THERAPIST'S ROLE

Co-regulation: bidirectional linkage of fluctuating emotions between client and therapist, contributing to emotional stability of both (Butler & Randall, 2013; Geller, 2018).

Therapist is co-regulator of emotion (physically and emotionally attuned)

- Synchronization leads to neuronal growth.
- Neuronal growth → new neural pathways are stimulated which help brain development, esp. in left side (verbal) and prefrontal cortex (judgement, executive functioning) (Courtois & Ford, 2016).

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WHAT SUPPORTS EMOTIONALLY ATTUNEMENT?

- Be mirror for client's emotions by naming them.
- Respond to emotional content rather than non-verbal body language, but name or notice the non-verbal language.
- Use what you notice in your body as information, which can be particularly helpful if client is dissociative.
- Notice and name moment by moment.

Non-Verbally:

- ***Your Voice Matters ->*** Prosody (rhythm and melody) in voice
- Soft facial expression
- Open & forward leaning body posture
- Soft & direct eye contact
- Attention on client

(Geller, 2018)

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SIGNS OF HYPERAROUSAL = Fight/Flight Sympathetic Activation	[1]Porges, 2016 [2]Corrigan & Fisher, & Nutt., 2011; Courtois & Ford, 2009; 2016; Siegel, 1999 3 Levine, 2018; [4]Ogden & Minton, 2000
Cognitive Signs	Lower cognitive functioning[1,4], Poor Judgement[4] Lowered awareness of others[1], Trauma-related fears/paranoia[4], Obsessive thoughts[2], Racing thoughts[2,4]
Emotional Signs	Anxiety Panic/Fear/Emotional Overwhelm[2], Intrusive imagery, emotions, sensations (flashbacks)[2, 4], Aggression[2] and/or irritability[2], Emotional Reactivity[2], Anger/Rage[2], Feeling unsafe[2]
Physical Signs	Pain[2], Physical Tension[2], Shaking[2]
Behavioral Signs	Hypervigilance[1] , Avoidance[1], Oppositional Behaviors[1] *(kids)*, Social Withdrawal[1], Traumatic Nightmares[4], Impulsive & Compulsive behaviors,[2,4] (e.g. Self-harm, substance abuse, disordered eating), Risk-taking[4], Rapid chest breathing,[3] Suspicious glances[3] Aggressive Outbursts[2], Dilated pupils[3], "edgy"[3], Visible Shaking[2]
Medical Signs	Hyperacusis (sound sensitivity) [1], Hypertension[1], Gut problems[1]

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SIGNS OF HYPOAROUSAL = Dorsal Vagal Parasympathetic Activation	[1]Porges, 2016 [2]Corrigan & Fisher, & Nutt., 2011; Courtois & Ford, 2009; 2016; Siegel, 1999. 3 Levine, 2018 [4]Levine, 2010; [5]Ogden & Minton, 2000
Cognitive Signs	Lower cognitive functioning[1,5] "Can't think"[2,5]
Emotional Signs	Emotional numbness[2,5], "feeling nothing" [2], Flat affect[2,5], Feeling disconnected[2], Dissociative states[1,2] Feeling "dead" [2,5], Depersonalization ("Is this real? Am I real?") [2], Preoccupied with self-loathing, shame, despair[5], Pervasive hopelessness[2]
Physical Signs	Immobilization[1,2], Collapse[1], Numbness[2], Lack of feeling or body sensations[2,] Noticeably Pale[1], Little or no energy/Exhaustion[2]
Behavioral Signs	"Spaced out" [3], Frozen/flat face,[3] Avoidance of eye contact,[3] "Passive[2], Can't say "no" [2], Can't defend oneself[2], Social Withdrawal[2,]
Medical Signs	Hypotension[1], Vasovagal syncope (fainting due to stressful trigger) [1], Chronic Fatigue[3,4], Migranes[4], GI[3,4] & urinary problems,[3] cardiac arrhythimias[3], episodes of dizziness[3], autoimmune disorders, [3] Fibromyalgia[1]

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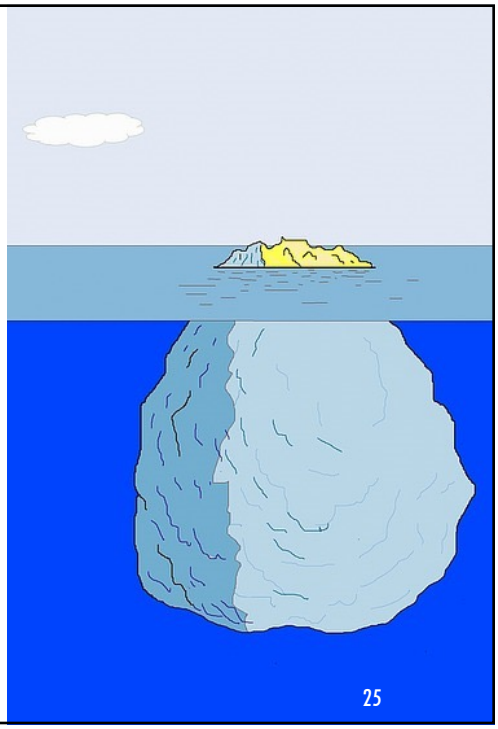
Clinical Challenges of Identifying Hypoarousal:

- Much harder to detect in higher functioning clients.
- Use your own body as a resource.

- Is a hypoaroused client stable or is client care taking/displaying protector part?
- Watch for dissociation and/or depersonalization when client's reports being numb.



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INTERVENTIONS FOR HYPER-AROUSAL & HYPO-AROUSAL STATES

All of these can be used throughout trauma treatment, especially during Phase 1: Stabilization

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Practical Interventions to Help Manage Hyperarousal	
Anxiety, Panic, Fear	• "Butterfly Hug" (Korn & Leeds, 2002) • Cold Stimulus to face (Richer et al., 2022) • Bring attention to feet and hands (Levine, 2018) • Heart Rate Variability Training (e.g. Tan et al., 2011) • Counting breaths (backwards) • Exercise (Zschucke et al., 2015).
Emotional Dysregulation/Uncontrollably Crying	• Slow Breathing with Long Exhalations (Geller, 2018) • Square Breathing • Deep Breathing with a Sigh (Moore, 2005) • Containment Skills/Imagery (EMDR Intervention) (Shapiro, Kaslow, & Maxfield, 2007).
Somatic Symptoms: shaking, tension, pain	• Progressive Muscle Relaxation • Micromovements/running in slow motion (Levine, 2010) • Guided Imagery
Aggression/Rage	• Pushing Against Wall • Exercise (Zschucke et al., 2015). • Safety plan as needed
Impulsivity/Compulsive/Reckless Behavior	• Safety Plan • Pro/Con List

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BUTTERFLY HUG

(ARTIGAS ET AL., 2000; BOEL, 1999, ARTIGAS & JARERO, 2010; JARERO & URIBE, 2014; JARERO & ARTIGAS, 2022; KORN & LEEDS, 2002)

Originally developed by Lucina Artigas during working with survivors of Hurricane Pauline in Acapulco, Mexico in 1998.

Self-administered bi-lateral stimulation (BLS):

- Like eye movements or tapping, can be used during Standard EMDR Protocol for trauma processing for individual or group work.
- Can be used with children, teens and adults (can practice as a family).
- Because, self-administered, can help with sense of safety.
- Helps clinicians prevent secondary traumatization (Jarero & Uribe, 2014).
- Culturally well received (from Melville, 2003 who has taught EMDR in 63 countries) vs other forms of BLS that could be interpreted as hypnosis, shamanic ritual, witchcraft or a spell.

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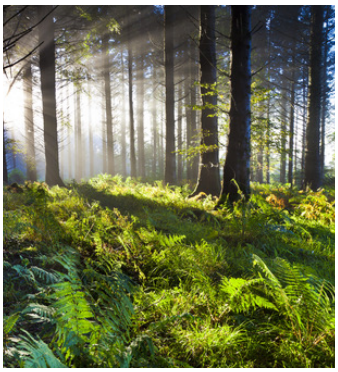
BUTTERFLY HUG

- Do no more than 6 times when pairing with positive resource
- (Jarero & Artigas, 2022, in press).
- BLS when paired with positive imagery can increase relaxation & positive affect (Amano, & Toichi, 2016) and naturally elicits relaxation (Girianto et al., 2021).
- Used during EMDR, though bi-product of slow tapping can be used as self-soothing tool during stabilization/resource development.

SLOW TAPPING & RELATIONAL RESOURCES

(ADAPTED FROM PARNELL, 2008)



<u>Resource Team:</u> Real or imagined, animals, figures from history, movies or from books

- Protective Figure
- Nurturing Figure
- Wise Figure/Inner Wisdom Figure

- Can use figure one at a time or all together → Tap to strengthen.
- "What do you feel in your body when you are with this protective figure?" ***(if feels positive, tap)***
- Can 'tap in' one protective figure at a time…You can imagine being held by your team of protective figures."

Practical Interventions to Help Manage Hypoarousal	

Emotional Numbness, Dissociation, Depersonalization, Shut down	• "Vooo Breath" (Levine, 2018, p.19; Levine, 2010):
	  • "Take in full breath..extend "voo" (like 'ou' in you)..as you exhale"
	  • Add visualization of foghorn guiding in ships in fog to safe harbor home.
	• Weighted Blanket
	• Engaging rhythmic activity (rolling ball, drumming)
	• Gentle Sensory Input (sounds, smells, etc.)
	• Singing and Chanting (Levine, 2018)
	• Running in place (Levine, 2010)
	• Mindfulness in form of internal tracking is counterproductive (Levine, 2018), but connecting to environment in present-moment way is helpful.

Sense of Immobility	• Exercise, Dance & Rhythmic Movement

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CREATE A SENSORY TOOK KIT FROM ITEMS IN YOUR HOME

The **smell** of ___ makes me calmer. (e.g. peppermint or lavender)

The **sound** of ____makes me calmer. (e.g. ocean waves).

The **taste** of _____makes me calmer. (e.g. warm tea).

The **touch/feel** of_____makes me calmer (e.g. warm water on my face).

The **picture/color**___makes me calmer. (e.g. images of nature)

(Adapted from Moore, 2005)

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Sense/Input	Calming for Hyperarousal	Alerting/Energizing for Hypoarousal
Smell	Vanilla candles; lavender	Strong scent candles (lemon)
Taste	Mild, sweet: hard candy, lollipop, apple juice, grapes	Peppermint, lemon drop, sourballs Lemonade, pickles
Oral Motor	Sucking & Chewy: gum, licorice, dried fruit, thick liquid thru straw, gummy bears, hard candy, bagel	Crunchy & Blowing: popcorn, pretzels, raw veggies, whistling, blowing bubbles, blowing pinwheel/wind instrument.
Vision	Soft colors, pictures of loved ones that are calming, watching fish in aquarium	Complex visual images, video game, bright colors
Hearing/Sound	Soft, slow music, humming, repetitive sound (ocean waves)	Quick-paced/loud music, whistling
Touch/Deep Pressure Touch	Deep Pressure: strong hugs Weighted blanket, squeezing stress ball Use of hand lotions, Deep massage	Light touch: Weighted blanket Sitting with pet on lap Hand/foot massage, walking barefoot
Vestibular Input	Rocking in chair/ swinging gently slow dancing, walking, slow head rolls	Fast Dancing Jogging, Swinging
Proprioception	Slow rhythmic movements or heavy, sustained resistance: Yoga, weight lifting Pushing hands together/against a wall Lifting, carrying, chair push ups	Quick changes, lots of movement/changing activities: trampoline jumping, Jogging Kickboxing, aerobic exercise, Jumping Rope, Stepper machine

Adapted from Moore, 2005

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THREE PHASES IN TRAUMA RECOVERY

Phase I: Stabilization
- Skill building and self-care.
- Increasing window of tolerance.

Phase II: Trauma Processing & Grieving

Phase III: Present Day Life
- Now what? Who am I besides a trauma survivor? Relationships, career, moving on

(Courtois & Ford, 2016 developed from ->van der Hart, Brown, & van der Kolk,1989; Herman, 1992 -> developed from Janet 1889/1973's model).

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WHY PHASE-ORIENTED TREATMENT?

- Research supports the effectiveness of phase-oriented models for PTSD treatment (Corrigan, et al., 2020).
- Pacing is KEY in attempt to control intensity.
- While research supports single-phase models (e.g. CBT for PTSD), research supports clinicians consider more blended practices, multi-interventions and/or multi-methods when treating Complex PTSD (Cloitre, 2020; Cloitre, 2021; Dyer, & Corrigan, 2021)
- Length of stabilization stages varies based on skills acquired rather than time.
- Phases are fluid and dynamic →Movement between stages throughout therapy.
- '*One step forward, two steps back*' is the norm: Relearn skills, rather than "failure". (Courtois & Ford, 2016)

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STABILIZATION PHASE & TREATMENT PLAN FOR PTSD

1. *Psychoeducation about PTSD*: Impact of trauma.
2. *Addressing client's current symptoms in context of PTSD* (and any other dx):
   - Flashbacks, rumination, intrusive thoughts, angry outbursts, irritability, generalized anxiety, insomnia.
   - Numbing, detachment, loss of interest in life, trauma-related fears, avoidance, concentration issues.
3. *Getting to Know the Landscape*: Identifying trauma-related internalized negative beliefs, feelings and sensorimotor reactions.

(Courtois & Ford, 2016)

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STABILIZATION PHASE & TREATMENT PLAN FOR PTSD

4. *Identify Current Triggers* (environmental/external, relational, internal, times of year):
   - Identify relationship between triggers → symptoms of PTSD → any harmful coping behaviors.
     - E.g. Identify sources of guilt, grief/loss and triggers for isolation and self-harm behavior.
   - Identify sequence of client's internal emotional process of activation when triggered by relational trauma trigger.
     - E.g. someone who is warm/nurturing → Panic/anxiety → dizzy/dissociation or "I've got to run.
   - Plan for known future/upcoming triggers or stressful situations (e.g. holidays, anniversaries).

(Courtois & Ford, 2016)

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STABILIZATION PHASE & TREATMENT PLAN FOR PTSD

5. *Learning coping skills, self-soothing skills, emotion regulation & stress management*
   - Using senses to help client feel more connected to body and aware of physical experience in addition to using breath, progressive muscle relaxation or guided imagery.
6. *Attending to client's physical needs:*
   - e.g. Sleep hygiene, eating regularly, exercise, basic self-care.
7. *Addressing safety needs*, create safety plan for any self-harm concerns:
   - If any previous suicide attempts, gather detail of trigger.
8. *Increasing Containment Skills:* routine, structure in daily life for sense of predictability.
9. *Increasing Affect Tolerance:* Decreasing affect dysregulation. (Courtois & Ford, 2016)

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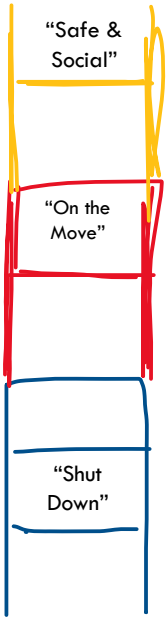

Ladder Map Exercise:

1. Choose colors for each autonomic state. E.g. "What color are you drawn to as you prepare to map danger, life threat and safety?"

2. For each state, It looks like….it sounds like…I think…I say….I do….
   My sleep is..
   My eating is……
   My overall functioning is….
   Other people notice that….

3. For each state, complete the two sentences:
   "I am……."
   "The world is……"

   e.g. I am ……lost, invisible, unlovable and alone.
   The world is……cold, absent and uninhabitable.

(Adapted from Dana & Grant, 2018, p. 192)

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TITRATION & PENDULATION

- Titration: Bite-sized pieces when talking about triggers.
- Pendulation: Titrating toe dipping in water, then back off and regulating. This is rhythm that can happen prior to trauma processing. (Levine, 2010)

Practical things to do in session:

- Art therapy/coloring while talking/having topics that help engage client (e.g. pets, children)
- Help client begin to internally track when getting activated,
- Practice asking to change topics/Notify others in relationship what's happening for them.
- Have positive reinforcement that pacing for client's nervous system is respected.

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PHASE ONE: STABILIZATION WHAT HAPPENS IN THERAPY?

- Increasing window of tolerance for emotions
  - Skills Training in Affect and Interpersonal Regulation (STAIR): STAIR COACH phone app (Free!)
  - DBT, Resource development if EMDR therapist
  - Culturally-based resources, social support, breathing, movement, dance, spirituality
- Strengthening support system (e.g. who can distract them? who can help soothe them?)
- Symptom Reduction (no processing of traumatic memories)
- Decrease alteration in consciousness (e.g. decrease dissociative sx)
- Develop ego strength

(Courtois & Ford, 2016)

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WHAT HAPPENS IN STABILIZATION PHASE RELATIONALLY?

- To experience relational safety + attunement in therapeutic relationship = secure base
  → secure inner working models.
- Attachment security in therapeutic relationship + emotion regulation skills:
  - Learn to regulate distress
  - Identify and change how they use avoidance to cope with actual or anticipated distress or danger.
- Conducting therapy in environment of safety and security → minimize threat of re-traumatization.

(Courtois & Ford, 2016; Dana; 2018; Marmar, Foy, Kagan & Pynoos, 1994)

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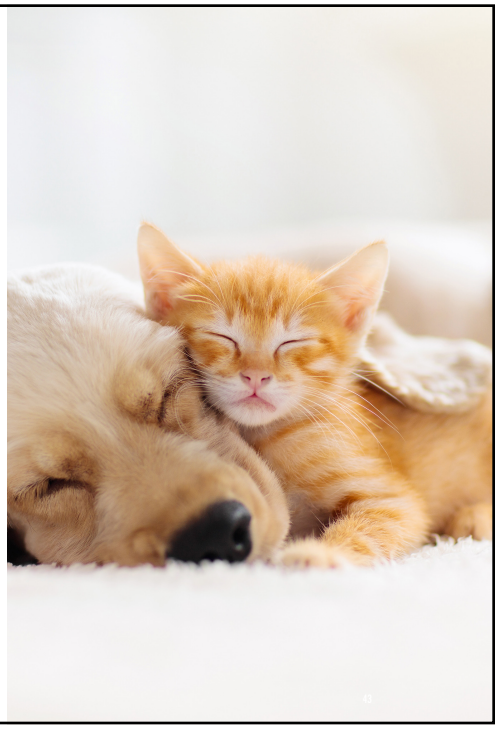
PRACTICES FOR STABILIZATION

<u>Routine:</u>

- Go to bed and wake up same time everyday.
- Eat at same time everyday.
- Sleep Hygiene/routine

- Connection to others – in person is best, seeing face/hearing voice, rather than text or email.
- Limit Media Exposure (Garfin, Silver, & Holman, 2015).



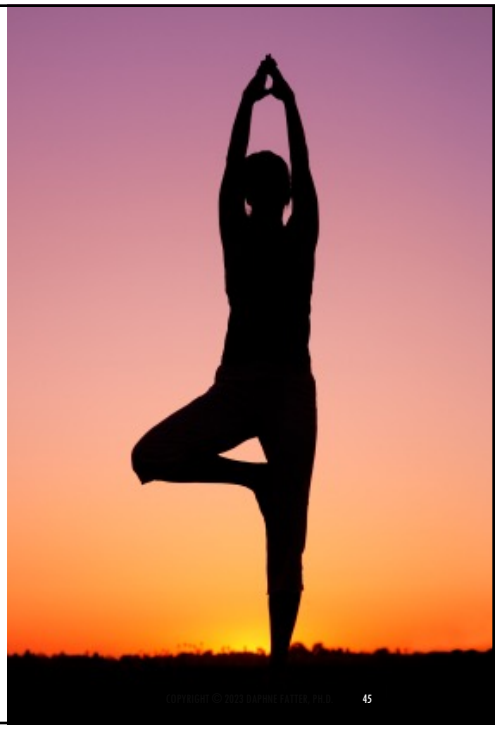
CLINICAL CONSIDERATIONS WITH PHASE-ORIENTED TRAUMA TREATMENT APPROACH

- Co-Morbidity
- Suicidality and self-injurious behavior
- Important to provide psychoeducation that clients move back and forth between stages.
- Client regression is normal and discuss what it means to client.

(Courtois & Ford, 2016)

ADJUNCTIVE THERAPIES FOR STABILIZATION PHASE

- Yoga
- Safe & Sound Protocol
- Heart-Rate Variability Training



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WHAT DO THESE ADJUNCTIVE THERAPIES HAVE IN COMMON?

Yoga, Safe & Sound Protocol, and Heart Rate Variability Training *all have the following in common:*

- Informed by Brain Research on Trauma
- Stimulate Vagal Tone/Impact Vagus Nerve
- Non-psychopharmacological approach
- Limited side effects

CAN HELP TRAUMA SURVIVORS LEARN TO REGULATE AROUSAL!

(Porges, 2018; Van der Kolk, 2014)

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YOGA AS ADJUNCTIVE THERAPY

- **Current Research on Exercise:**
- Rosenbaum, et al., 2015 in meta-analysis of 4 studies showed physical activity helpful as adjunctive therapy for PTSD.
- Heissel et al., 2023 found that exercise (of moderate intensity & aerobic) – is an evidenced based treatment for depression along with medication and therapy.

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YOGA AS ADJUNCTIVE THERAPY

Three Components:

1) **Postures** --- help disconnect association of particular movement or sensation with trauma or with past. (least researched)
2) **Meditation** --- increases interoceptivity, affect tolerance, decreases stress-related symptoms, depression, anxiety, among other benefits.
3) **Breathing practices** --- changing breathing patterns → change autonomic nervous system functioning, vagal tone and heart rate variability.

(van der Kolk et al., 2014)

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YOGA & PTSD

Trauma-sensitive yoga: Hatha-based Yoga (Emerson et al, 2009):

- Trauma Center Trauma-Sensitive Yoga is an adjunctive evidenced-based practice to help with stabilization, skill-building and emotion regulation for chronic, treatment-resistant PTSD and complex trauma (See SAMSHA, National Registry of Evidenced-Based Practices).

- Yoga (Hatha) can help clients be aware of, tolerate and re-interpret body sensations, which may help affect regulation.
- Reduces autonomic sympathetic activation, decreases muscle tension, blood pressure.
- Improves neuroendocrine and hormonal activity.
- Decrease emotional distress and improves body attunement.

(Emerson et al., 2009; van der Kolk et al., 2014; Streeter et al., 2012).

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PRELIMINARY RESEARCH ON YOGA & PTSD

Overall, research on yoga and PTSD shows that that yoga (see Nguyen-Feng et al, 2020 for review):

- Decreased PTSD and depressive symptoms
- Decreased emotional distress
- Increased body attunement
- Increased self-compassion (Clark et al., 2014; Rhodes, 2015).
- Increased meaning in one's life (Clark et al., 2014; Rhodes, 2015).

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RESEARCH ON YOGA WITH PTSD POPULATION

- Yoga research thus far suggests that physical and interoceptive aspects of yoga contribute to decrease in PTSD symptomology rather than social aspect of group (Emerson et al., 2009; van der Kolk et al., 2014).
- 60 women with treatment resistant PTSD from chronic trauma did 10 sessions of yoga and had statistically significant decreases in PTSD, dissociative symptoms, self-injury, and depressive symptoms compared with control. (van der Kolk et al., 2014).
  - This study has been replicated with sig decrease in PTSD (Nguyen-Feng et al, 2020).
- Yoga contributes to decrease in PTSD in female veterans with MST (Kelly et al., 2021).
- Frequency of yoga practice significantly predicted more decrease in depression severity, PTSD severity and greater chance of PTSD diagnosis – 1.5 year follow up (Rhodes et al., 2016).

LIMITATIONS

- One focus group (ethnicities not identified in study) among non-practitioners of yoga identified barriers to yoga practice:
  - Time commitment, cost, child-care constraints
  - Perception of yoga being religious practice (Atkinson & Permuth-Levine, 2009)
- Among Spanish-speaking Latina women: classes needed in Spanish and can be offered in context of larger group treatment for trauma (e.g. Trauma Recovery and Empowerment Model (TREM; Harris, 1998) adapted as *Saber es Poder* (Knowledge is Power) (Kirlin, 2010; Wallis & Amaro, 2006).
- Yoga and meditation are both promising (Gallegos, et al., 2017).
- Need for more research based on meta analysis (Cramer et al., 2018; Gallegos, et al., 2017).

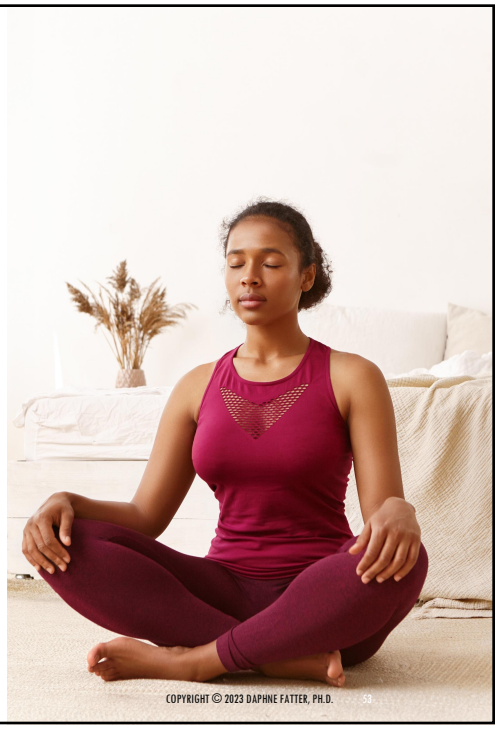
TRAUMA SENSITIVE YOGA RESOURCES

Trauma Sensitive Yoga:
https://www.traumasensitiveyoga.com

Restorative Yoga for Ethnic and Race-Based Stress and Trauma (2020) by Gail Parker, Ph.D.

https://liberatemeditation.com/ (Meditation App Honoring BIPOC peoples)

https://www.theshineapp.com/ (Meditation App Focused on Healing Racial Battle Fatigue)



WHAT IS SAFE & SOUND PROTOCOL?

- SSP is a five-hour acoustic intervention of listening to filtered music designed to reduce stress and auditory sensitivity while enhancing social engagement and resilience.
  - SSP literally is a neural exercise via the middle ear associated with regulating social engagement system.
- Music has been computer-altered to train the middle ear muscles to better focus in on the frequency of human speech, and open social engagement system.

(Porges, 2018)

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WHO ARE GOOD SSP CANDIDATES

- Children on Autism spectrum can't filter out lower frequency sounds, so can't appropriately process the human voice. (Similar to people that have PTSD).
- Can use SPP starting as young as 18 Months old.
- Symptoms/diagnostic features that make clients good candidates for SSP:
  - Anxiety; Hyperarousal
  - Auditory hypersensitivity; auditory processing, vestibular and/or tactile sensory difficulty
  - Inattention
  - Behavioral dysregulation
  - Experience of trauma
  - Difficulty with social communication

(Porges, 2016; 2018)

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SIDE EFFECTS DURING SSP

- Irritability; Anxiety
- Face may feel hot (sign of more blood flow since targeting facial muscles via social engagement system).
- Itchy or mild ache in ear/Ear Pressure (like on an airplane).
- Mild Dizziness

Limitations of SSP: bulk of research is on children on the spectrum; limited research on PTSD population and more research currently in clinical trials.

(Porges, 2016; 2018)

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BIOFEEDBACK -- HEART RATE VARIABILITY

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WHAT IS HEART RATE VARIABILITY?

- Measure of the beat-to-beat changes in the heart rate.
- Important indicator of both physiological resiliency & behavioral flexibility
- HRV Training helps teach how to down-regulate the autonomic nervous system.

(Gilman, 2011; McCraty, 2015)

Why its helpful:

- Research shows that daily biofeedback sessions → increase the amplitude of heart rate oscillations → improve emotional well being.
- Links Between HRV and Brain Regions Involved in Emotion Regulation
- (See Mather & Thayer, 2018 for review)

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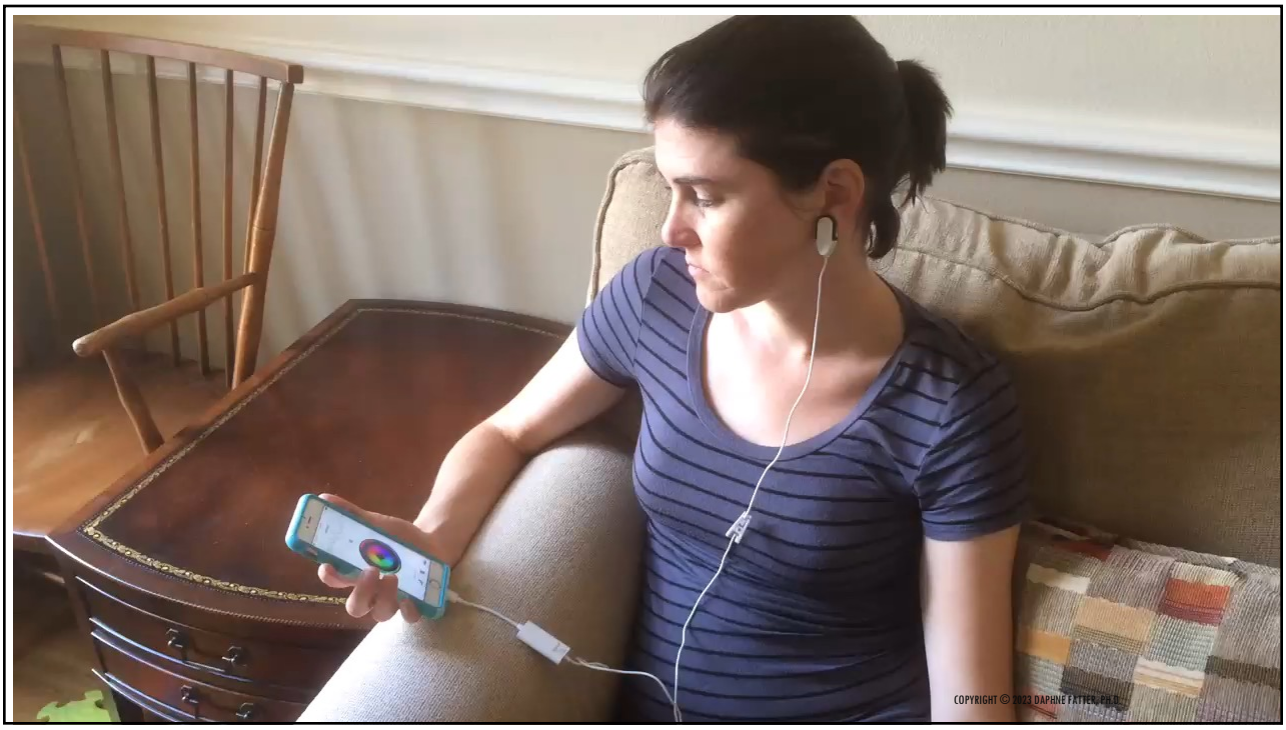

QUICK COHERENCE TECHNIQUE

1) **Heart Focus:** Focus your attention to the center of your chest. Can place your hand on your chest.

2) **Heart-Focused Breathing:** Imagine your breath flowing in and out of your heart space. Continue until your breathing feels smooth and balanced.

3) **Heart Feeling:** Recall a positive feeling. Can be remembering a time in which you felt peaceful and calm or can be feeling of gratefulness for someone or for experiences. Bring positive feelings to your heart space as you breathe from your heart.

(Adapted from Gilman, 2011)

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RESEARCH ON HRV BIOFEEDBACK

Research has shown that HRV training for people with PTSD can help:

- Increase psychophysiological coherence.
- Improve cognitive functioning.
- Increase HRV.
- Reduce PTSD symptoms.

(Ginsberg et al., 2010; McCraty, 2015; Tan et al., 2011)

- Decreased PTSD symptoms (Schuman, et al., 2019; Schuman et al., 2023) compared to diaphragmic breathing alone (Schuman, et al., 2019).

Limitations:

- Need for enhanced methodological guidelines in research on HRV (Lalanza et al.,2023).
- Adherence can go down over time (Schuman et al., 2023).

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IMPLEMENTING HRV TRAINING

Introducing it to clients: "Biofeedback is way to learn how to breathe so that your heart sends a message to brain to relax".

Practice during non-stressful times and stressful times. Practice with eyes closed or eyes open

If clients have difficulty connecting to positive emotion, start small (e.g. feelings towards pet, client getting to session, etc.)

Great way to end session, so clients are in state of coherence as they transition into the rest of their day.

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PROMISING APPROACHES FOR PTSD

1. Neurofeedback (Chiba, et al., 2019; Fragedakis & Toriello, 2014; Gapen et al., 2016; Huang-Storms, L., et al., 2007; Mills, 2012; Nicholson et al., 2020; Panisch et al., 2020 for review; Zweerings et al., 2020)
2. Transcranial magnetic stimulation (See Petrosino et al., 2021 for review)
3. Psychedelic-Assisted Psychotherapy:
   - Current Research https://maps.org/
   - Training: https://compasspathways.training/
   - Training and Clinics: https://www.fieldtriphealth.com

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MY FAVORITE FREE PHONE APPS

"**PTSD Coach**" Phone Application

"STAIR Coach" Phone Application

"**Insight Timer**" Phone Application

"**PTSD Family Coach**" (for family members)

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THREE PHASES IN TRAUMA RECOVERY

Phase I: Stabilization
- Skill building and self-care.
- Increasing window of tolerance.

Phase II: Trauma Processing & Grieving

Phase III: Present Day Life
- Now what? Who am I besides a trauma survivor? Relationships, career, moving on

(Courtois & Ford, 2016 developed from -> van der Hart, Brown, & van der Kolk,1989; Herman, 1992 -> developed from Janet 1889/1973's model).

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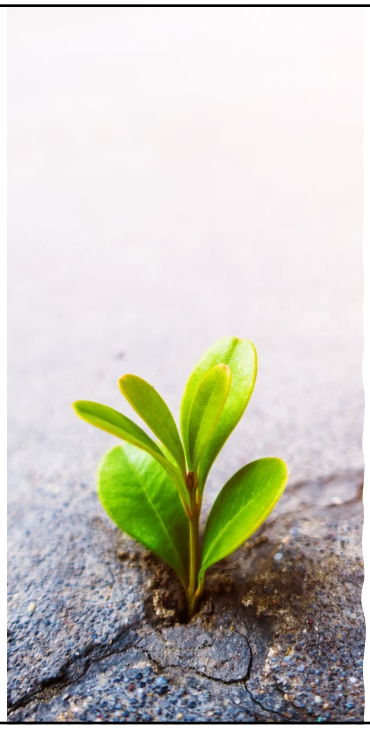

WHAT IS TRAUMA PROCESSING?

- **Desensitization** to traumatic memory + feelings &physical sensations associated with re-experiencing memory.
- **Construction of new meaning** –> a more adaptive view of self, others and traumatic events.
- **Integrating both rational and linguistic processes** to raw unmetabolized fragmented traumatic experiential data.

(Courtois & Ford, 2016)

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WHAT IS TRAUMA PROCESSING?

Structured process: Client can make an informed choice, give informed consent and have a sense of what will happen next in process(within reason).

Focus on the hardest most painful parts of the traumatic event.

- Indicator of resolution = **trauma narrative is coherent and fits into larger life narrative.**
  - Survivor can reflect on it and know experientially its in past and can be "lived with".*(Paivio & Pascual-Leone, 2010)*

(Courtois & Ford, 2016)

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PHASE TWO: TRAUMA PROCESSING & GRIEVING

Objective/ Focus of Treatment Plan: (Explore Traumatic Memories):

1. Integrate traumatic memories into coherent life narrative → Improve self-perception + Improve ability to be in relationships with others.
2. Cognitive restructuring internalized negative beliefs about self in relation to trauma (e.g. "It's my fault") that are impacting client's current life and functioning.
3. Decrease negative affect and sensorimotor reactions associated with trauma memories.
4. Grieving and putting client's lived experience of traumatic experiences into words.

(Courtois & Ford, 2016)

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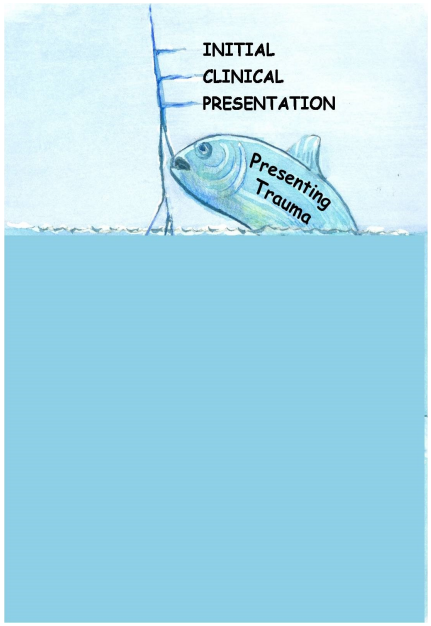

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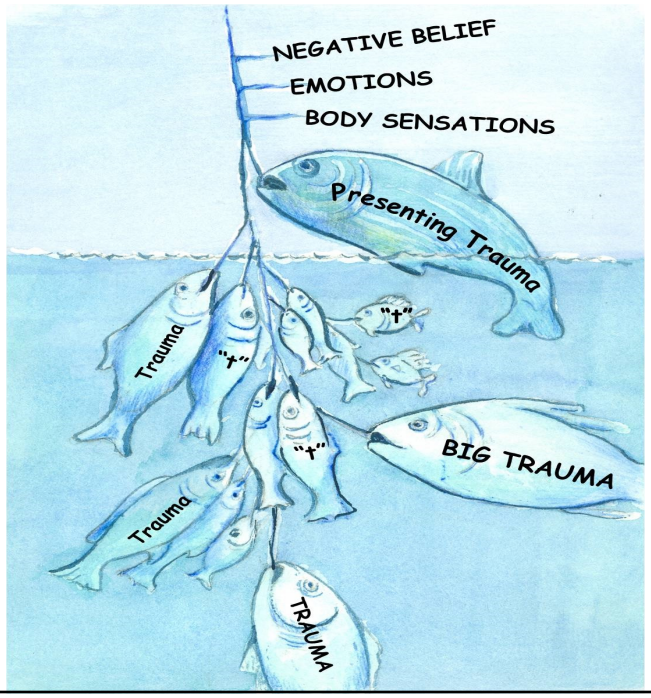

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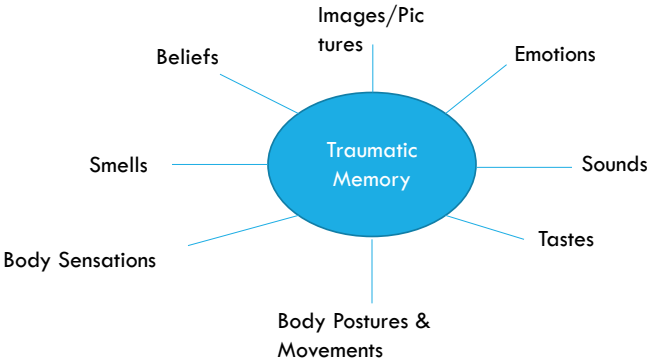
TRAUMATIC MEMORY

Traumatic memory is stored in isolated fragments of sensory perceptions, affective states and sensory-motor levels (Nemiah, 1998; van der Kolk & van der Hart, 1991).



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TRAUMATIC MEMORIES VS NON-TRAUMATIC MEMORIES

ADAPTED FROM VAN DER KOLK ET AL., 1994; VAN DER KOLK & FISLER, 1995, VAN DER KOLK ET AL., 1996.

Traumatic Memories	Non-traumatic Memories
Stored as raw sensorimotor data in forms of smells, sounds, images, body sensations, emotions.	Integrated into consciousness with sensory experience intact (sensory exp. Is not stored separately).
Not connected to language and not "encoded" with context.	Context to Memory =Meaningful narrative. Beginning, middle and end to story.

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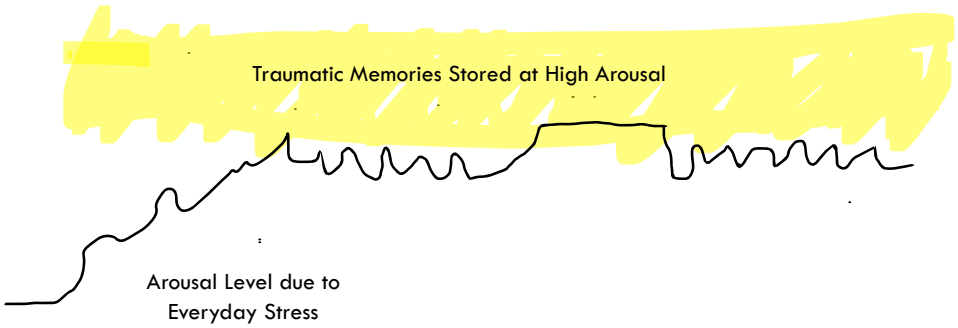
Why Stabilization Phase is Important: Managing Activation



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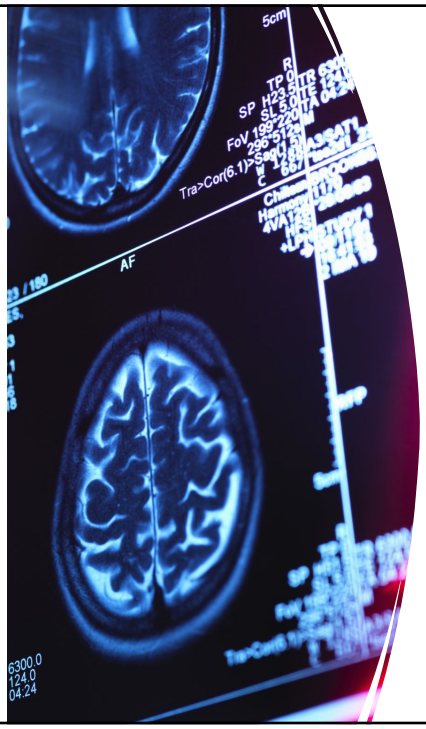

LEFT VS RIGHT HEMISPHERE

(FISHER, 2017)

We compartmentalize under stress ->

- Right brain dominant through childhood (Cozolino, 2002; Schore, 2001).
- Left brain development is slow over first 18 years of life.
- Corpus callosum – develops by age 12.

Tiecher (2004) found correlation between a history of neglect and/or abuse with under-development of corpus callosum compared with controls.

Trauma => independent development of right and left hemispheres = "two brains", instead of one integrated brain (Gazzaniga, 2015; Fisher, 2017).

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TRAUMA = "TWO BRAINS"

(GAZZANIGA, 2015; FISHER, 2017)

Left Brain – "The Storyteller"	Right Brain – "The Truth Teller"
○ Autobiographical Memory + Acquired Knowledge	○ Implicit Memory (and sensory information)
○ Tendency to grasp "gist" of situation. ○ Making inferences that fits well with general schema of situation and throws out the rest.	○ "does not forget" non-verbal aspects of experience. ○ Only identifies the original information - does not interpret it.
○ Ability to encode with language doesn't mean its more accurate - makes it easier to process information.	○ Without effective communication via corpus callosum, split-brain researchers observed that left might have no memory of right's emotion-driven actions.

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REALISTIC EXPECTATIONS OF TRAUMA PROCESSING

- Decrease emotional and sensorimotor reactivity to traumatic memories:
  - The memory may not become neutral, but no longer experienced as currently a threat.
- Integrate the traumatic experience into one's life narrative and reduce the impact of the trauma on daily functioning
- Develop a personal understanding of their life that is:
  - Coherent (can be put into words)
  - Has a logical sequence of client's feelings, thoughts and actions during traumatic event.
  - Includes a theory/sense of understanding of motives & actions/inactions of others (other victims, caregivers who helped or didn't protect or help, bystanders, community response) & how this impacted client's experience. (Courtois & Ford, 2016)

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IS YOUR CLIENT READY FOR TRAUMA PROCESSING?

Trauma processing isn't for everyone.

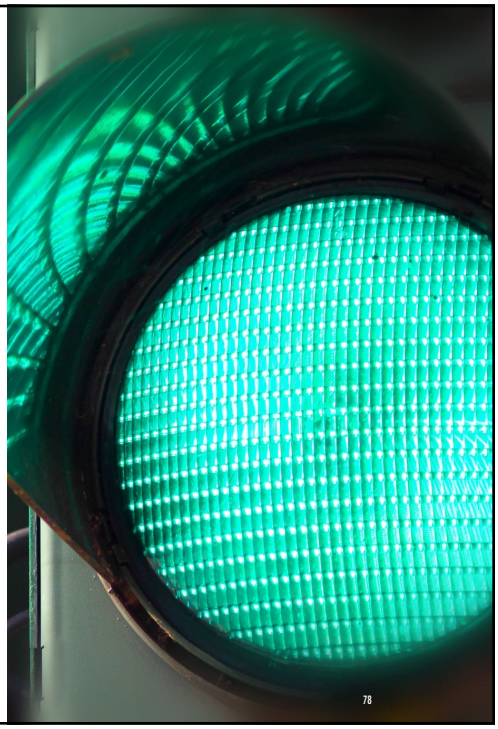
Personal resources: (e.g. skills taught via STAIR, DBT, etc.)
- Self-soothing skills (breath, exercise, self-talk, faith, dance)
- Containment skills (e.g. safe place imagery)

Support system:
- Tiers of support: People to lean on & people to have fun with.

Stability in life: ***Traumatic experience is over.***
- Stable housing/employment/income/things are ideally somewhat stable.
- Medication is appropriately being managed and serving client.

Recent Traumas: Losses due to COVID & group protocols for critical incidents- > EMDR.

(e.g. Jarero & Artigas, 2012; Jarero & Artigas, 2014; Manfield, et al. 2021).



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RACIAL TRAUMAS & OPPRESSION-BASED TRAUMAS

H-I-P-P Theory: Historical, Intergenerational, Persistent-Institutional and Personal Traumas (Menakem, 2017; 2020).

Racial traumas (Archer, 2021; Ashley & Libscomb, 2023)

- Trauma processing can potentially activate powerlessness and helplessness associated with racial trauma and other oppression-based traumas.
- May need to assess if therapy appropriately addressed other oppression-based memories that are not the presenting problem but may re-enforce feelings, body sensations and/or internalized beliefs.
- Need to consider how client will manage activation in between sessions given reality that racial trauma could occur in between sessions.

Hyper-vigilance-necessary to cope with an unsafe world (***do not pathologize***) (Sue, 2010).

- Any rationalization or minimization by therapist = re-victimize client.

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CULTURAL COMPETENCY

Intersectionality: refers to the way in which a person with multiple marginalized identities, experience a compounding impact of trauma and oppression (Crenshaw, 2005).

-> Qualitatively differs than the experience of trauma survivors from dominant cultural groups (Bryant-Davis, 2019).

-> Chronic stress-> allostatic load -> body functioning is comprised (See Archer, 2021 for review).

Practice cultural humility

Be aware of one's own social location as therapist

Consider cultural context of client's traumatic experience

(Archer, 2021; Ashley & Libscomb, 2023; Bryant-Davis, 2019).

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ASSESSMENTS FOR OPPRESSION-BASED TRAUMA INCLUDING RACIAL TRAUMA

- Trauma Symptoms of Discriminations Scale (TSDS) (Williams et al., 2018).
- Race Based Trauma Stress Symptom Scale (Carter et al, 2013).
- Uconn Racial/Ethnicity Stress & Trauma Stress Scale (UnRESTS) (Williams, Metzger, Leins, & DeLapp, 2018).
- ***Resource:*** http://www.mentalhealthdisparities.org/trauma-research.php

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FIRST STEP IN TRAUMA PROCESSING

Informed Consent: THIS IS THE #1 most important initial step in trauma processing!

- Client can stop at any time including mid-session.
- Know risks and side effects and benefits of procedure.
- What to expect emotionally (short term increase of symptoms).
- Plan for how to manage arousal during processing and in between sessions.
- Procedure for how to stop during processing.

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CULTURAL CONSIDERATIONS BEFORE TRAUMA PROCESSING

Layers of Trauma: Traumatic Event + Response by Family/Support System + Shame.

Find out from your client:

- Meaning of traumatic event? Who knows in their support system? How did family react?
- Identify outside resources/referrals that are culturally appropriate?
- What does it mean that they are seeking help regarding trauma according to culture?
- What does it mean to address trauma directly in therapy according to cultural beliefs?

(Brown, 2008; Drozdek & Wilson, 2007; Dutton,1998; Hendricks, 2015)

Case Examples: "You will become tainted"; Transplant; After-life.

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CULTURAL CONSIDERATIONS BEFORE TRAUMA PROCESSING

Language "code switching" (alternating between 2+ languages) in trauma processing has been shown to help client:

- More fully express emotions.
- More likely to occurs when emotions increase, heightened when talking about traumatic event and feelings of shame.
- Can be strategically used by therapist for titration (distancing or increasing intensity).

(Dewaele & Costa, 2013)

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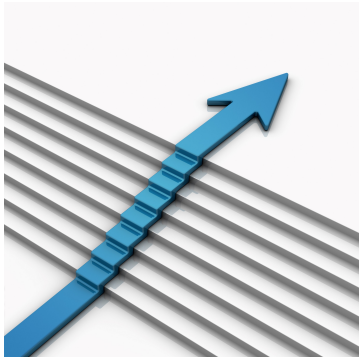
SETTING UP TRAUMA PROCESSING FOR SUCCESS

- **Shared decision making** (Hamblen, et al., 2019; Harik et al., 2016)
  - Hear all the available treatment options.
  - Specifically know about treatment effectiveness and side effects.
- **Client being able to choose** -> may improve retention because of self-selection (Lewis et al., 2020b; Harik et al., 2016).
- **Individualized treatment plans.** There are many trauma models that are evidenced-based –
  - **Trauma Treatment is not 'one size fits all;** (Hamblen, et al., 2019; Lewis et al., 2020b).



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TRAUMA PROCESSING MODELS

"Top Down" Processing Models:

- Prolonged Exposure Therapy (PE or ET)
- Cognitive Processing Therapy (CPT)

"Bottom Up" Processing Models:

- Eye-Movement Desensitization & Reprocessing (EMDR)
- Internal Family Systems (IFS)

All can be adapted given population and be used for culturally or race-based traumas.

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PROLONGED EXPOSURE THERAPY

- Most Extensively Scientifically Validated Treatment for PTSD.

Goal: Diminish fear response via extinction process.

- Decreased anxiety and fear response via habituation
- Learn new responses to stimuli and change beliefs about trauma.

(Foa & Kozak, 1986; Foa, Hembree & Rothbaum, 2019).

PE Coach Free Phone App

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CONCEPTUALIZING TRAUMA VIA PROLONGED EXPOSURE THERAPY

PTSD is a result of conditioning:

- **Classical Conditioning**: Thoughts, feelings, and sensations are paired with the trauma memory.

  Every stimulus in environment including one's physical sensations and feelings at the time of the trauma -> conditioned danger response.

- **Operant Conditioning:**

  Avoidance of people/places/activities/feelings/thoughts in order to escape negative/aversive experience.

  Avoidance

  = thinking about trauma + situations that remind client of trauma.

(Foa, Hembree & Rothbaum, 2019)

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STEPS OF PE TREATMENT

(FOA, HEMBREE, ROTHBAUM, 2019)

8-15 SESSIONS, 90 MINUTES EACH

Session1: Rationale for PE, Identify the Index Trauma through the trauma interview (collecting information about the trauma, the client's reactions to the trauma), and breathing retraining to help with general coping.

Session 2 (may be two sessions): Review homework. Client talks about their reactions to traumatic event. The hierarchy for in vivo exposure is constructed, and in vivo exposure homework continues for the rest of therapy.

Session 3: Imaginal exposure and processing begins; continues the rest of therapy.

Session 4 & Intermediate Sessions: Review homework. Client progressively focuses on hotspots (most distressing aspects) during imaginal exposure describing the trauma in greater revisiting.

The Final Session: homework review, recounting the entire trauma memory only once (15-25 minutes), Review of progress, relapse prevention, and treatment termination.

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COGNITIVE PROCESSING THERAPY

Goal:

- Identify and resolve distorted belief systems/stuck points related to why trauma occurred.
- Enables processing of natural emotions of traumatic event.
- Address the meaning making of traumatic event.
- Can be culturally adapted.
- CPT changes thoughts -> then emotions change naturally.

(Gordon et al., 2019; Resick & Schnicke, 1993; Resick, Monson, & Chard, 2017)

CPT Coach Free Phone App

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CONCEPTUALIZING TRAUMA VIA COGNITIVE PROCESSING THERAPY

Based on Social Cognitive Theory:

- How survivor cognitively processes trauma impacts his/her emotions.
- Trauma impacts beliefs about world, self and others.
- Trauma impacts beliefs about:
  - Safety
  - Trust
  - Power/control
  - Self-esteem
  - Intimacy

- Originally developed with the written trauma account but can be delivered without written accounts.

(Resick & Schnicke, 1993; Resick, Nishith, & Griggen 2003; Resick, Monson, & Chard, 2017)

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12 SESSION STRUCTURE OF CPT

(SEE RESICK, MONSON, & CHARD, 2017 FOR REVIEW)

1. Psychoeducation on PTSD (Write Impact Statement & reading on stuck points.)
2. Read Impact Statement, Stuck Point Log; A-B-C Worksheets (Identifying Emotions, A-B-C worksheets).
3. A-B-C Worksheets everyday.
4. Challenging Questions; Learning about Responsibility & Blame.
5. Focus on Stuck Points & Patterns of Problematic Thinking.
6. Stuck Points & Challenging Beliefs Worksheets.
7. Challenging Beliefs Worksheets & Focus on **Safety** Stuck Points.
8. Identify & Focus on Stuck Points related to **Trust Issues**.
9. Identify & Focus on Stuck Points related to **Power & Control Issues**.
10. Identify & Focus on Stuck Points related to **Self-Esteem Issues.**
11. Identify & Focus on Stuck Points related to **Intimacy**. (Write Final Impact Statement).
12. Review first impact statement vs last impact statement on why trauma occurred.

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CURRENT RESEARCH ON PE & CPT

PE: (Powers et al., 2010)

- Meta-analysis shows that PE clients who complete treatment did 86% better than control group.
- There was no significant difference between PE and CPT & EMDR.

Both PE & CPT:

- 65% decrease in PTSD sx; 36% clinically sig. improvement among American veteran population (Sripada et al., 2019).

CPT:

- In recent systematic review of research, indicates Cognitive Processing Therapy and EMDR as having robust evidence in PTSD treatment (Lewis et al., 2020a).
- Over 85% of participants who were randomized to CPT reported clinical improvements at follow up (average was 6 years later). (Resick et al., 2012).
- In looking at side-effects, normal for most participants (67.3%) to experience at least one temporary symptom increase during CPT (only 1.6% of sample continued to have higher symptoms by the end of treatment). (Larsen et al., 2022).

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LIMITATIONS & RISKS OF PE & CPT

(HUNDT ET. AL., 2016; SCHOTTENBAUER, ET. AL., 2008)

Prolonged Exposure Therapy:	Cognitive Processing Therapy:
Talking + confronting triggers -> Habituation -> Extinction.	Writing -> Identifying Stuck points-> Cognitive Re-structuring
Homework: Behaviorally confronting triggering situations & listening to recording of traumatic event.	Homework: Worksheets for cognitive restructuring for both traditional and CPT-C.
Drop out rate: 43% in veterans (Wells, et al., 2022) Have 5+ years lasting impacts	Drop out rate: 29% (Kline, Cooper, Rytwinksi, & Feeny, 2018) Have 5+ years lasting impacts

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EYE MOVEMENT DESENSITIZATION & REPROCESSING (EMDR)

- Francine Shapiro, Ph.D. developed in 1989.
- **Goal:**
  - Process trauma memories to "adaptive resolution"
  - Unmetabolized distressing memories are reason for client's cognitive/emotional/somatic reactions
  - Eye movements (and/or other bilateral stimulation) helps clients process memories and make adaptive associations between memory networks.
    - connect to prefrontal cortex
    - helps client access new information into memory network
    - Create new meanings and belief systems regarding trauma

(Korn, 2009; Shapiro,2018)

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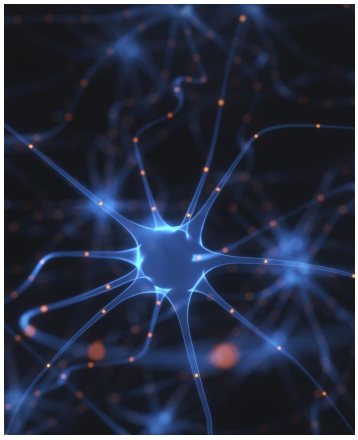
CONCEPTUALIZING TRAUMA VIA EMDR

Traumatic event/adverse life experience ->

- Encoded maladaptively within emotional, cognitive, somatosensory and temporal systems.
- Inadequate linkage with memory networks containing more adaptive information.
- Experienced by client in fragmented form.
- Pathology occurs when new information is 'inadequately processed' & stored in a maladaptive way in the memory networks

(Korn, 2009; Shapiro,2018)



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EMDR: 8 PHASES OF TREATMENT

1. **History/Treatment Planning**
2. **Client Preparation:** Resource Development
3. **Assessment Phase:**
   - "Three-pronged" Approach: Past, present and future
   - Negative cognition, validity of cognition, emotions/body/SUDS
4. **Desensitization & Reprocessing:**
   - Dual attention.
5. **Installation of Positive Cognition**
6. **Body Scan**
7. **Closure**
8. **Reevaluation**

(Korn, 2009; Shapiro,2018)

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HOW DOES EMDR WORK?

(SEE LANDIN-ROMERO ET AL., 2018 FOR REVIEW)

Mechanism of change for EMDR is still in infancy & an integrative explanation is proposed due to multiple processes occurring in EMDR:

- **Working Memory Hypothesis**:

  1) Dual attention task of bilateral stimulation taxes working memory -> decreasing level of arousal associated with traumatic memory.

  2) Increases access to episodic memories.

  3) Activates working memory which facilitates a process of accessing traumatic memories in a tolerable way.

  (Jeffries & Davis, 2013; Landin-Romero et. at.,2018)

- **Mimics REM sleep theory**: 'kick starts' processes active during REM sleep.
- **Intra-hemispheric changes in right hemisphere and interhemispheric changes between right and left hemispheres.**
- **Multiple changes in the brain**: Neuroimaging research shows after EMDR increase in hippocampal volume, increased activity in left frontal lobe and the anterior cingulate gyrus (in limbic system)-> increased emotion regulation; traumatic memories experienced as no longer threatening.

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CURRENT RESEARCH

- Recent systematic review, EMDR is effective for PTSD treatment (see Chen et al., 2014; Maxfield, 2019 & Novo Navarro et. Al., 2018 for review).
- In review of RTC of EMDR, 7 of 10 studies reported EMDR therapy to be more effective and/or more rapid than trauma-focused cognitive behavioral therapy (Shapiro, 2014).
- Research supports its effectiveness for telehealth with CPTSD (Bongaerts et al., 2021).
- Over 80 percent of the clients in study no longer met the diagnostic criteria of PTSD and Complex PTSD after EMDR (Bongaerts et al 2022).
- As shown in PET scans, clients had a clear clinical improvement in PTSD symptoms associated with metabolic and electrophysiological changes in limbic and associative cortex (Pagani et al., 2018).

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CULTURAL CONSIDERATIONS WITH EMDR

Is not dependent on language & respectful of keeping memories private. Can work with translators; Does not require literacy.

Multi-modal:

- Can use drawings as needed for image of trauma.
- Uses sensory information from body/emotions.
- Can be used with children, teens, and adults and also in groups.
- Requires no homework

Client-centered and culturally centered:

- Specific resources regarding belonging and cultural resources.
- Specific protocols for specific populations and types of traumas.
- Therapist does not interfere or making interpretations about client experience.

(Nickerson, 2023)

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EMDR: RISKS & LIMITATIONS

Client needs to have dual awareness (e.g. client focuses on the worst image of a traumatic memory while also engaging in an external task of eye movements/Bi-Lateral Stimulation).

Best for clients with hyperarousal symptoms (not hypoarousal) because EMDR relies on client being able to access arousal.

Need to be able to state change; screen for dissociation.

Client needs to not be taking benzodiazepines –they block REM sleep.

Side Effects: Fatigue; Open up memory network.

Abreactions: Highly emotional/intense; Dissociation. (Shapiro, 2018)

Non-responders to Bi-Lateral Stimulation: No research.

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INTERNAL FAMILY SYSTEMS

Richard Schwartz, Ph.D. developed it 40 years ago.

Is considered an evidence-based practice for depression, phobia, panic, generalized anxiety disorder, and PTSD.

Goal:

- Reorganize internal system so Self is leader.
- Help Client live from Self, rather than living from parts.
- Liberate parts from the extreme roles they were forced into so they can share their natural valuable gifts.
- Balance/harmony within a flexible internal system.

(Schwartz, 1995; Schwartz & Sweezy, 2020; Schwartz, 2021)

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CONCEPTUALIZING TRAUMA VIA IFS

Notion that we all have parts and a Self (essence that is compassionate, non-judgmental & undamaged by trauma).

Parts hold memories/ have their story, can become polarized with parts, and carry "burdens" (extreme emotions + beliefs).

In IFS:

- Bring person into relationship with their own parts.
- First work with protectors, get permission to work with exiles.
- Intrapersonally: IFS repairs Internal Ruptures between Parts & Self

(Anderson et al., 2017; Anderson, 2021; Schwartz, 1995; Schwartz & Sweezy, 2020;Schwartz, Schwartz, & Galperin, 2009)

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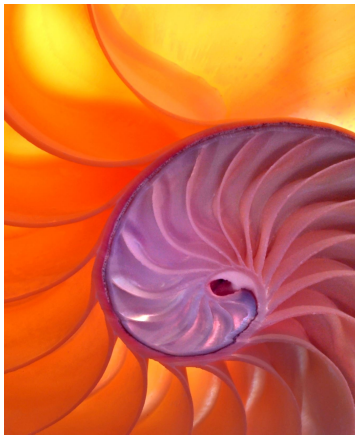
WHAT IS SELF?

8 C's:	5 P's:
Curiosity	Presence
Calm	Perspective
Compassion	Persistence
Courage	Playfulness
Creativity	Patience
Connectedness	
Clarity	
Confidence	

(Anderson et al., 2017; Anderson, 2021; Schwartz & Sweezy, 2020; Schwartz,1995; Schwartz, 2021)



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TYPES OF PROTECTIVE PARTS

(ANDERSON ET AL., 2017; SCHWARTZ & SWEEZY, 2020; SCHWARTZ, SCHWARTZ, & GALPERIN, 2009; SCHWARTZ,1995)

Managers

Proactive helper parts that pre-emptively prevent exiles from getting triggered.

Firefighters

Reactive parts that act after exile is triggered, try to extinguish feelings no matter what.

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EXILES

ANDERSON ET AL., 2017; SCHWARTZ & SWEEZY, 2020; SCHWARTZ, SCHWARTZ, & GALPERIN, 2009; SCHWARTZ,1995

- Parts that experienced attachment/relational injuries and traumas
- Hold burdens of shock, betrayal, and pain from trauma.
- Tend to be most tender, sensitive, innocent, child-like parts and can be various ages.
- Can become isolated from system in order to protect person from pain of trauma.
- Typically frozen in time and stuck in traumatic memories.

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Steps of IFS

(Schwartz, 1995; Schwartz & Sweezy, 2020; Schwartz, 2021)

1.Identify a Target Part: Get Contract and Separate Part from Self.
2.Befriending Protective System - (The Gatekeepers: Managers & Firefighters)
- •Developing trusting relationship between Self and Protective System.
- •Getting to know fears and concerns of protectors.
- •Getting Permission to work with an Exile

3.Befriending Exile: Developing trusting relationship between Self and Exile.
- •Accessing Exile.
- •Getting to know Exile and developing relationship between Self & Exile.

4.Witnessing: Adult Self is witnessing exile's story, traumatic experiences, fears, memories; re-parenting is happening here.
5.Retrieval (optional): Take Exile out of traumatic memories to help stabilize part. Bring it to present time or to safe place.
- •This step can happen before or after witnessing, or before or after unburdening.

6.Unburdening Exiles: releasing extreme beliefs, feelings, pain.
7.Invitation: Inviting in positive qualities that part wants or needs now or in the future.
8.Integration: Introduce Transformed exile to protectors. Ask exile new role in system. Ask protectors or any other parts their response to unburdening. Protectors may need to unburden and move into their preferred role in system.
9.Appreciation/Closure: Appreciate all parts who showed up!

CURRENT RESEARCH

In a pilot study, IFS was used (Hodgdon, et al, 2021) to reduce PTSD symptoms among adults with histories of multiple childhood traumas.

Methods: 17 adult participants who received 16 weekly, 90-minute sessions of IFS Therapy.

Results: Multiple PTSD measures were used (CAPS, Davidson Trauma Scale) , as well as measures for depression (BDI), measures for dissociation, somatization, disrupted self-perception and affect regulation (SIDES-SR), self-compassion (SCS) and interoceptive awareness (MAIA).

- Statistically significant decreases in PTSD and depression.
- Increases in interoceptive awareness and self-compassion.
- ***At one-month follow-up assessment, 92% of participants no longer met criteria for PTSD.***

IFS: RISKS & LIMITATIONS

Client-centered:

Client controls pacing as its dictated by parts.

Attends to complexity of our multiple and intersectionality of identities.

Limitations:

- Research largely case studies.
- Clients need to be willing to connect with parts of themselves.

Risks (no research yet):

- Side Effects: Fatigue and can open up somatic symptoms.
- Abreactions: Can be highly emotional/intense.
- Non-responders: No research.

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CONTRAINDICATIONS FOR TRAUMA PROCESSING?

- Substance dependence.
- Active suicidality or homicidally.
- Current Psychosis.
- Uncontrolled/Unmedicated bipolar disorder.
- Some clients can't tolerate increased symptoms (Courtois & Ford, 2016).
- Co-morbid personality disorders including over-identification with 'sick' role (Song et al., 2023).

(Courtois & Ford, 2016)

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Factors in Decision-Making	PE	CPT	EMDR	IFS
Talk or write about trauma	X	X		
Will do homework	X	X		
Address multiple traumas at once			X	X
Only focus on one trauma at a time.	X	X	X	
No memory		Possibly	Possibly	X
Session Length	12 sessions	12 sessions	Depends	Depends

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CASE EXAMPLE: PE IMAGINAL EXPOSURE

Male client who was driver in car Accident in which his child died who was in the car.

"**Therapist:** What is your SUDS just before we start?

Client: 80. (on scale of 0-100)

Therapist: Okay. Take yourself back to the day of the accident. What happened just before?

(Client shares traumatic experience – eventually discussing the hotspot)

Therapist: Remember, it's just a memory. You are safe here in the office; keep going. It will get easier each time.....Remember, it is just a memory, and a memory on its own can't hurt you.

As we keep practicing these exposures you will feel less fear and anxiety. Eventually the memory will no longer cause you any fear. You should be really proud of what you just did. It took a lot of courage to talk about the accident so openly. How do you feel?

Client: I feel okay. A little anxious still.

Therapist: Do you think you could try that again?

Client: I think so.

Therapist: Okay, when you are ready, I want you to start again." (Adapted from Monson & Shnaider, 2014)

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CASE EXAMPLE: EMDR

If your client wants to process just one specific trauma (without processing others)?

EMDR (EMD or EMDr that can do this) if client has limited time frame to work with in therapy.

- Case example using EMDR: White, heterosexual, cis-gender, male in mid- 60s, who lost his wife to cancer during COVID. Used recent-events protocol.
- Case example using EMDR: Latina, heterosexual, cis-gender client who immigrated to US, had traumatic birth experience and is expecting her second child. Treatment goals were to decrease her anxiety about upcoming birth and desensitize memories from past birth experience.

CASE EXAMPLE: EMDR

If your client wants to address multiple traumas:

Case Examples:

- African-American female client processing multiple racial traumas.
- Latina client addressing micro-aggressions at work.
- White female client addressing incest by father.
- White male client addressing grief of suicide of veteran son.

Case Example	PTSD, MDD
Age 47	Son Died
Age 47	Job Loss
Age 40	Betrayal Trauma; Husband was unfaithful
Age 12-17	Sexual Abuse
Age 9-19	Physical Abuse
Age 3	Hit by car
Attachment Trauma	Caretaker of mother

CASE EXAMPLE: CPT

Stuck points:

- **Safety:** "I have to protect others. If I don't, something bad will happen".
- **Trust:** "Other people can't be trusted because people who loved me, hurt me."
- **Power/Control:** "I have to be in control because if I'm not, someone will get hurt or my adult children will die."
- **Esteem:** "I must have done something to be punished. I deserve to have bad things happen to me"
- **Intimacy:** "If I let people in, they will hurt me."

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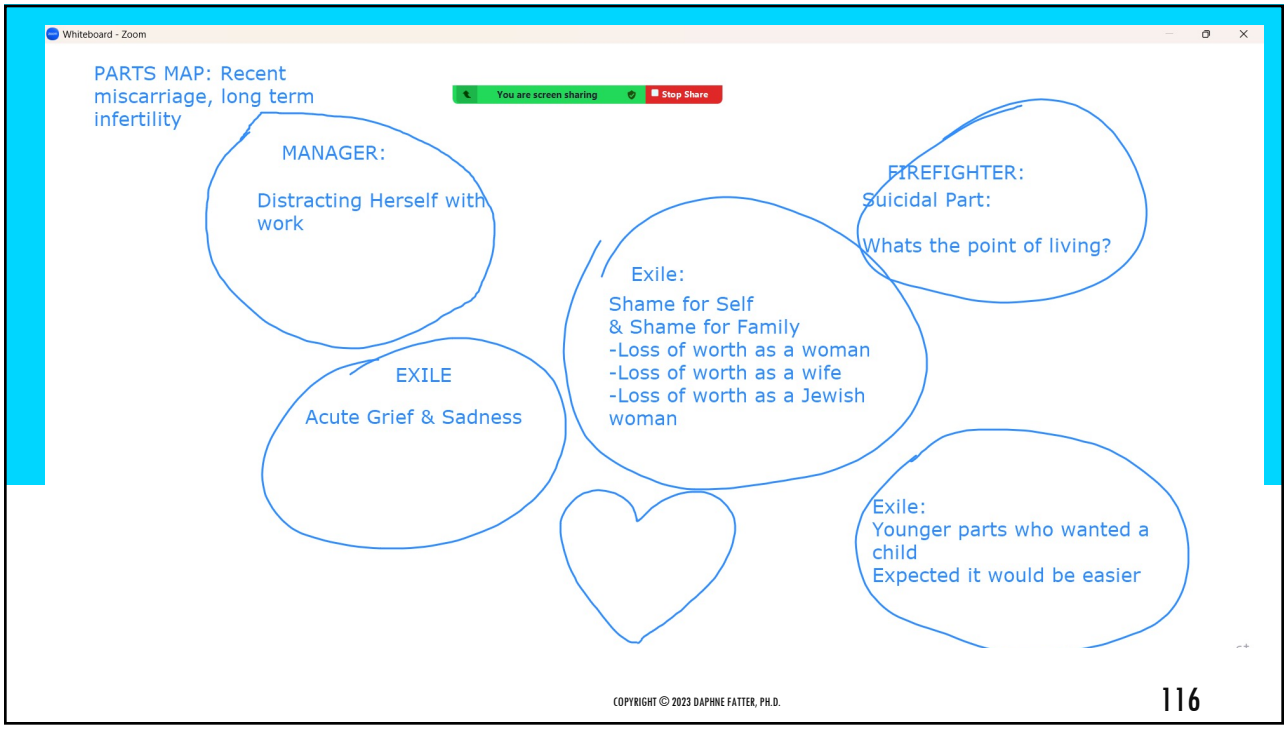

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4 SIGNS TRAUMA PROCESSING IS EFFECTIVE

Indicators of Successful Trauma Processing:

1. Client isn't overwhelmed by traumatic memory.
2. PTSD symptoms have decreased post-treatment.
3. The benefits of trauma processing are generalizing to client's daily life, relationships, mood.
4. Client views the traumatic event as fitting into larger life narrative in coherent way.
   - Client can verbally describe the impact on their life.

➢After Trauma Processing→ Phase 3: Present-Day Life

(Courtois & Ford, 2016)

THREE PHASES IN TRAUMA RECOVERY

Phase I: Stabilization
- Skill building and self-care.
- Increasing window of tolerance.

Phase II: Trauma Processing & Grieving

Phase III: Present Day Life
- Now what? Who am I besides a trauma survivor? Relationships, career, moving on

(Courtois & Ford, 2016 developed from -> van der Hart, Brown, & van der Kolk,1989; Herman, 1992 -> developed from Janet 1889/1973's model).

PHASE THREE: PRESENT DAY LIFE

2 Main Treatment Goals:

Apply Therapeutic gains to daily life and future:

- Who am I now? What do I want now in my life?
- Practical, emphasis on what choices does client have

Prepare for ending treatment.

(Courtois & Ford, 2016)

PHASE THREE: PRESENT DAY TREATMENT PLAN FOR PTSD

1. Increase connection with trustworthy peers.
2. Identify meaningful work.
3. Increase comfort in one's body and possibility to experience pleasure in one's body.
4. Identify and increase pleasurable activities (Can client take pleasure in?)
5. Focus on quality of relationships
6. Develop sense of self other than trauma survivor or victim.

(Courtois & Ford, 2016)

QUESTIONS?

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TO GET TRAINING TO BECOME A SSP PROVIDER

Integrated Listening Systems:
https://integratedlistening.com/

HEART RATE VARIABILITY & NEUROFEEDBACK RESOURCES

Note: there are many devices for HRV training:

- To find a certified HRV or neurofeedback practitioner: http://www.bcia.org/

For Training, research and education on neurofeedback:

- EEG SPECTRUM INTERNATIONAL: http://www.eegspectrum.com/

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CLINICAL RESOURCES ON TRAUMA

International Society for Traumatic Stress Studies: www.istss.org

International Society for the Study of Trauma and Dissociation: www.isst-d.org/

National Center for Post Traumatic Stress Disorder: www.ncptsd.org

National Child Traumatic Stress Network: www.nctsn.org

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CLINICAL RESOURCES FOR PE

Foa, E. B., Hembree, E. A., & Rothbaum, B. O. (2019). *Prolonged exposure therapy for PTSD: Emotional processing of traumatic experiences, therapist guide* (2nd ed.). Oxford University Press.

CLINICAL RESOURCES FOR CPT

Resick PA, Monson CM, & Chard KM (2017). Cognitive processing therapy for PTSD: A comprehensive manual. New York, NY: The Guilford Press.

Additional Training:

https://cptforptsd.com/

National Center for PTSD in US http://www.ptsd.va.gov/

CLINICAL RESOURCES FOR EMDR

Shaprio, F. (2018). Eye Movement Desensitization and Reprocessing (EMDR) Therapy: *Basic Principles, Protocols and Procedures.(3rd edition)* Guilford Press.

EMDR International Association: http://www.emdria.org/

CLINICAL RESOURCES FOR IFS

The IFS Institute: https://ifs-institute.com/

- Podcasts:
  - IFS Talks: https://internalfamilysystems.pt/ifs-talks
  - The One Inside: An Internal Family Systems Podcast: https://theoneinside.libsyn.com/

Starter Resources for Adult Clients or Therapists:

Sounds true Audio: greater-than-the-sum-of-our-parts

- *Parts Work: An Illustrated Guide to Your Inner Life*, by Tom Holmes, Ph.D.
- *No Bad Parts* by Dr. Richard Schwartz, Ph.D. (2021)

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