

# **The Body Remembers: Nature-Informed Approach to Trauma Recovery for Children**

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Alliant International University  
California School  
of Professional Psychology

# Presenter



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Dr. Cheryl Fisher is a certified trauma specialist with over 20 years of clinical experience and has deployed locally and nationally with the American Red Cross Disaster Mental Health Team and Maryland Responds Medical Corp. Her research interests include the role of spirituality in overall well being, and the therapeutic benefits of engaging in nature. She is an international speaker, columnist for Counseling Today Online, and author of ***Mindfulness and Nature Based Therapeutic Techniques for Children.***



# Objectives

- ▶ Participants will
  1. Explore the impact of trauma on neurological development of children.
  2. Examine the resiliency of neuroplasticity
  3. Discuss the BASIC Ph Model as a whole-brain, whole body approach to resiliency
  4. Identify the impact of engaging in natural settings on the development of resilient coping skills.
  5. Apply tools to a case study.

# Prevalence of ACES



## + Prevalence of Child Trauma



- Exposure to **violence** affects almost **2 in every 3** children (1)
- **46 of the 76 million** children living in the U.S. are exposed to violence, crime, and abuse each year (1)
- **1 in 10** children are exposed to **complex trauma**; domestic violence and child abuse commonly co-occur (1)
- **Physical abuse** is the leading substantiated report of child maltreatment in **military families** and are at an increased risk when caregivers are deployed (2)
- Nationally Representative Sample (12-17 year olds) (3)
  - **8% sexually assaulted**
  - **17% physically assaulted**
  - **39% witnessed violence** (domestic/community)

1. Office of Juvenile Justice and Delinquency Prevention (OJJDP). (December 2012). *Report of the Attorney General's National Task Force on Children Exposed to Violence: Defending Childhood*. Author. pp. 27, 85, 38.

2. Burtz, E.D., Moran, S.L., Giblin, D.A., Chirmo-Sherratt, M., Hardison, J., Marshall, S.W. (2005). Family violence in the military: A review of the literature. *Trauma, Violence, & Abuse*, 7(2), 53-106.

3. <http://www.yutan.org/resources/topics/Date-and-Square>



# Impact of Childhood Trauma

## Impact of Childhood Trauma



### Cognition

- Impaired readiness to learn
- Difficulty problem-solving
- Language delays
- Problems with concentration
- Poor academic achievement

### Brain development

- Smaller brain size
- Less efficient processing
- Impaired stress response
- Changes in gene expression

### Physical health

- Sleep disorders
- Eating disorders
- Poor immune system functioning
- Cardiovascular disease
- Shorter life span

## Impact of Childhood Trauma

### Behavior

- Poor self-regulation
- Social withdrawal
- Aggression
- Poor impulse control
- Risk-taking/illegal activity
- Sexual acting out
- Adolescent pregnancy
- Drug and alcohol misuse

### Emotions

- Difficulty controlling emotions
- Trouble recognizing emotions
- Limited coping skills
- Increased sensitivity to stress
- Shame and guilt
- Excessive worry, hopelessness
- Feelings of helplessness/lack of self-efficacy

### Mental health

- Depression
- Anxiety
- Negative self-image/low self-esteem
- Posttraumatic Stress Disorder (PTSD)

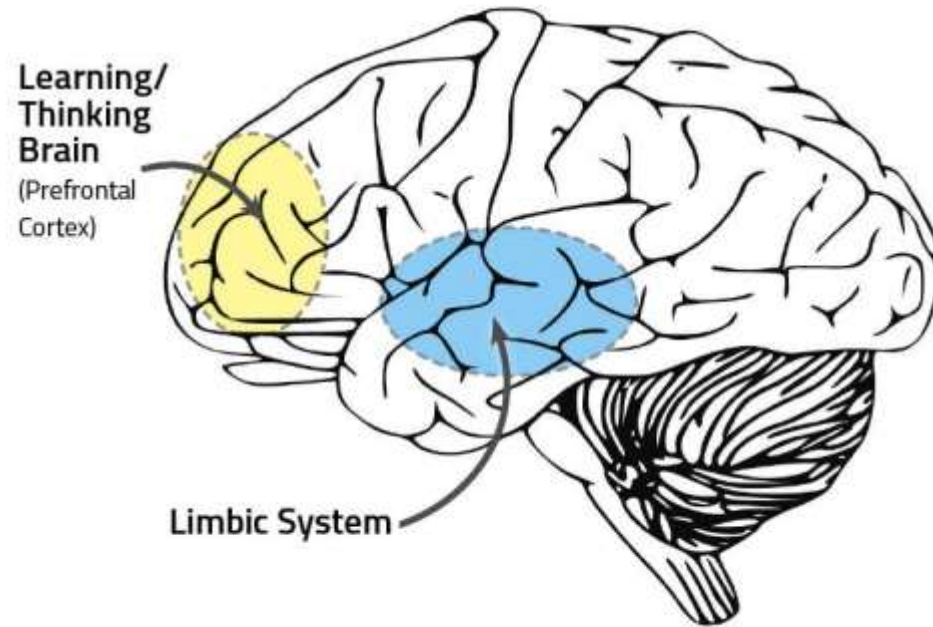
### Relationships

- Attachment problems/disorders
- Poor understanding of social interactions
- Difficulty forming relationships with peers
- Problems in romantic relationships

# Survival and the Brain

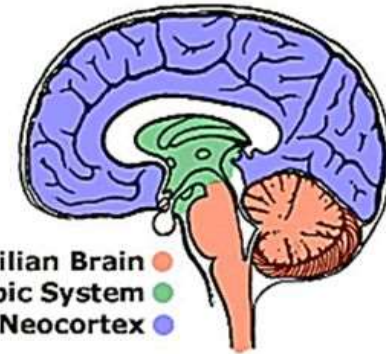
## Survival Mode: Flight/Fight/Freeze

Frontal lobe (Prefrontal cortex) goes offline  
Limbic system / mind and lower brain functions take over



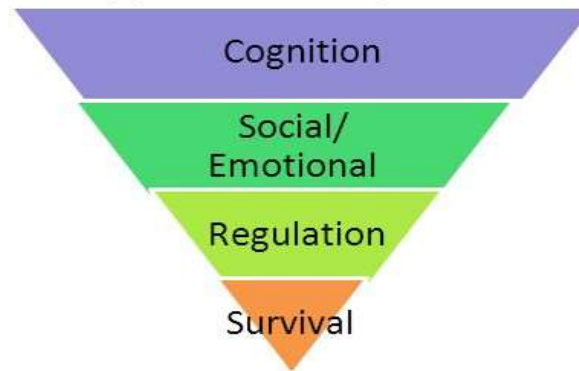
# Trauma & Brain

## Trauma & Brain Development



Reptilian Brain ●  
Limbic System ●  
Neocortex ●

### Typical Development



### Developmental Trauma



Adapted from Holt & Jordan, Ohio Dept. of Education



# Trauma and the Body

- ▶ Stored in the body
- ▶ Pre-verbal
- ▶ Talk therapy isn't effective with children





# Trauma Recovery Approaches

01

Capitalize on the brain's neuroplasticity

02

Top Down approach

- Talking
- Reconnecting with others
- Processing traumatic event

03

Bottom Up approach

- Multi-sensory approach emphasizing engaging body
- Experiences of empowerment, strength and confidence (differ from trauma)

# BASIC PH Resiliency Model

Six modalities/channels that constitute/contribute to resiliency:

- ▶ Beliefs, (What meaning do I give my situation?)
- ▶ Affect, (Calm and alert...emotionally regulated)
- ▶ Social Functioning, (Are my relationships healthy and trustworthy?)
- ▶ Imagination, (Creativity and Innovation)
- ▶ Cognition (The story I'm telling myself?)
- ▶ Physiology (Do I have agency?)
- ▶ **The unique, individual combination of channels helps people cope effectively with stressful situations and lessens the chances of developing psychopathology as a result of exposure to traumatic incidents.**
- ▶ Yet, academically and clinically we still emphasize cognitive development only
  - ▶ Excerpt from Berger & Lahad (2010).

# Nature :Biopsychosocialspiritual & Multisensory Experience

Engages-

- Cognitive- create meaningful narratives
- Social –navigate bio-diversity
- Emotional/Affect – Calm and alert
- Complex Problem solving
- Sensory/Physical- empowering and builds confidence
- Creative/Imagination
- Spiritual/Beliefs- Awe and Wonder



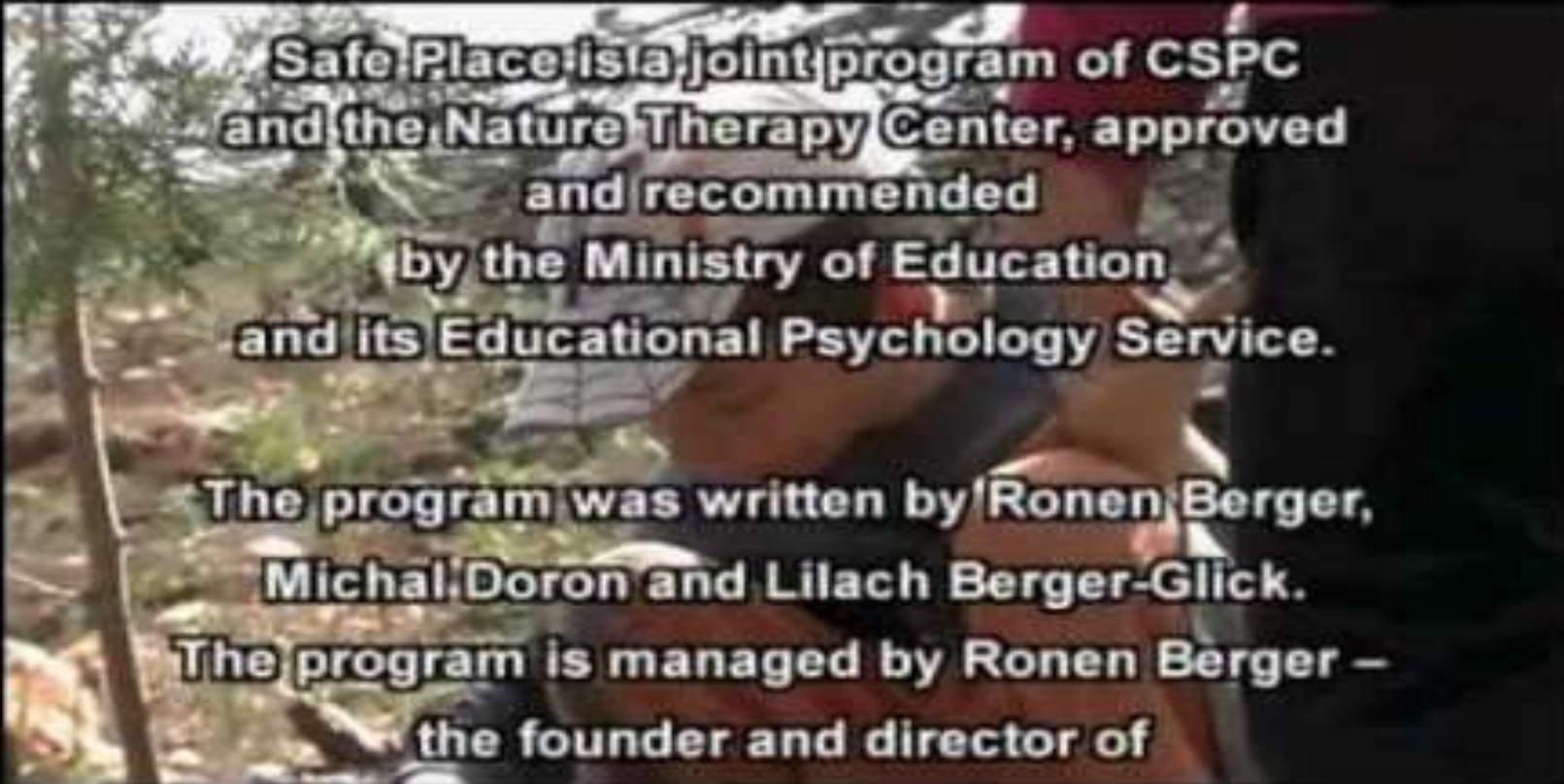


# Nature as a Co-Therapist

- ▶ Safe Place programs and Second Lebanese War.
- ▶ The land and the people suffered
- ▶ Counselors and educators created a program and book to help with healing.
- ▶ <https://www.youtube.com/watch?v=HnIKIHdhAUo>



# Safe Place



**Safe Place is a joint program of CSPC  
and the Nature Therapy Center, approved  
and recommended  
by the Ministry of Education  
and its Educational Psychology Service.**

**The program was written by Ronen Berger,  
Michal Doron and Lilach Berger-Glick.**

**The program is managed by Ronen Berger –  
the founder and director of**



# Nature and Resiliency

(Berger & Lahad, 2010)

- ▶ **“Nature invites us to make room for the child within, those parts of us that feel, imagine and are present in the experience of playing.**
- ▶ **Connecting to the cycles of nature can help us bond with parallel processes in our lives and to relate to them in a broad universal context. An encounter with a migrating bird, a dead lizard or a blooming plant can be a stimulus for expressing a similar story within us, of which we were previously ashamed. Sharing the story can normalize it and impart hope.**
- ▶ **The direct contact with natural elements, the wind, the earth, the plants, can connect us to our body and can awaken the world of images and emotions. Something in the encounter with nature and its powers has the potential to connect us to ourselves; to our strengths and to our coping resources” (p. 892).**



- “For real change to take place, the body needs to learn that the danger has passed and to live in the reality of the present” (van der Kolk, 2015, p.21)
- Children need to experience their bodies and sensory organs in a safe way (Fisher, 2019,p. 85).





# Nature Informed Therapy



- Assumes
- We are of nature.
- Reconnecting to natural settings reboots our neurological wiring
- The reciprocal relationship is mutually healing.





## Benefits of Nature Informed Therapy

- ▶ Nature is inherently calming (negative ions, terpenes)
  - ▶ children diagnosed with ADHD who are exposed to green spaces (e.g., parks, forests) are more relaxed and focused (Taylor & Kuo, 2011)
- ▶ It improves vision.
  - ▶ children who are predisposed to myopia are “three times less likely to need glasses if they spend more than 14 hours a week outdoors” (Ohio State University Center for Clinical and Translational Science, 2014)
- ▶ Promotes children's ability to listen and can assist with facilitating proprioceptive awareness.
  - ▶ Ex: listening to a bird chirping in the distance can help children differentiate their body in space.



## Benefits of Nature Informed Therapy (cont.)

- ▶ Offers an abundance of tactile experiences that enhances children's sense of touch.
  - ▶ Wet puddles, gooey mud slides, slippery reptiles, prickly pine cones, rocky sand, and lumpy pastures are all grist for the mill of sensory integration
- ▶ Enhances children's sense of taste and smell.
  - ▶ Apples off the tree just taste better!
- ▶ Promotes movement and exploration
  - ▶ Grassy knolls, dry deserts, muddy swamps, rough-barked trees, and cool, wet ponds each beckon the child to explore their vastness and move in a variety of ways.



# Ethical Considerations

- ▶ Do all parties feel physically and emotionally safe?
  - ▶ Allergies or phobias?
- ▶ Framing the relationship.
  - ▶ Does the client prefer the leather chair office format?
- ▶ Is it confidentiality compliant?
  - ▶ Public places?
- ▶ Get appropriate training.
  - ▶ If you do not know how to kayak, taking clients on a wilderness kayak expedition may not be wise. Always get training before using any modality in therapy.
- ▶ Informed Consent
  - ▶ It is always prudent to have clients sign an informed consent form that stipulates the possible risks and benefits of any therapeutic modality used in session.





# Nature Informed Interventions



# Forest Bathing

(Lee, J., Li, Q., Tyrväinen, L., Tsunetsugu, Y., Park, B., Kagawa, T. & Miyazaki, Y. (2012))

- ▶ ShinrinYoku- Japanese word for “taking in the forest” or Forest bathing
  - ▶ Walking, breathing, being with intention in the forest
  - ▶ Prescribed in hospitals and clinics
  - ▶ <http://www.shinrin-yoku.org>
- ▶ 15 minutes- results observed
  - ▶ Lower blood pressure
  - ▶ Reduced cortisol and norepinephrine
  - ▶ Increased calm alter state
  - ▶ Increased NK cells (immune system)
    - ▶ Resulting from phytoncides produced by trees and plants.
- ▶ Day trip to suburban forest
  - ▶ Benefits observed
  - ▶ Last up to 7 days post exposure



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# Animal-Assisted Research and Cognitive and Emotional Well-Being in Children

- ▶ May improve the therapeutic relationship, overall wellbeing, and settlement outcomes with refugee children. (Every, Smith, Smith, Trigg & Thompson, 2017).
- ▶ Beneficial to children experiencing problematic parental substance use as it offers an environment in which they can feel safe and secure and are supported to grow, personally and socially, by mastering fears, making new friends, and improving their interpersonal behaviors.(Dunlop & Tsantefski, 2017).
- ▶ Provides calming, socializing, motivating, and cognitive effects of children diagnosed with ADHD (Signal, Taylor, Prentice, McDade & Burke, 2017).
- ▶ Caring for animals promotes empathy toward others (Kahn & Kellert, 2002)

# Nature-Informed Sensory Activities and Tools

- ▶ Sensory boxes (sand, rocks, wood chips, water, shells, mud)
- ▶ Make potpourri
- ▶ Make seed bombs
  - ▶ Combine small amount of water, soil/clay and seeds you want to plant. Make small balls and let dry. Then take home and throw wherever the client wants to plant.
- ▶ Attentive and selective stimuli (sight, sound, smell, touch...)
  - ▶ Nature walk
    - ▶ Treasure Hunt/ I Spy (Visual)
    - ▶ Mindfulness and Active Meditation (Movement)
    - ▶ Grounding-3:2:1 (complete sensory)



# Nature Informed Interventions

- Cloud spotting
- Rock Balancing
- Nature Bingo
- Color Walk
- Sound scape
- Nature Mandala







## Bring Outdoors In Creating Nature-Informed Space

- ▶ Lighting
- ▶ Window gardens
- ▶ Tabletop Rock garden/Zen garden
- ▶ Window bird feeder
- ▶ Potted herbs
- ▶ Nature bins (shells, rocks, sea glass, twigs, feathers, sand, seeds...)
- ▶ Beta Fish (ex. "Olive")
- ▶ Repurposed nature-informed furniture
- ▶ Tabletop waterfall
- ▶ Small potted tree
- ▶ Carnivorous garden (Venus Fly Trap...)



# Nature-Informed Indoor Alternatives to Promote Emotional Regulation

- ▶ **Looking outside a window at nature** is more effective than playing outside on concrete devoid of grass and trees (Taylor & Kuo, 2011; Taylor, Kuo & Sullivan, 2001).
- ▶ Nature-Enhanced 'time out/away' area.
  - ▶ Tabletop waterfall- listen to the waterfall
  - ▶ Potted herbs- pinch the leaves and smell the herbs
  - ▶ Nature sound machine-listen to the different sounds
  - ▶ Small sand tray- feel the sand
  - ▶ Emotional Emoji's for children to indicate Calm, Sad, Happy, Angry

Children can use as a space to 'regroup' and when feeling 'regulated' can indicate via Emoji card and return to task.

Older children can use a worksheet/log to identify any other thoughts that accompany the dysregulation.



# Case Study

Anna

15 year old Caucasian female

Hx. gang rape under an oak tree while she was walking home from school at the age of 13.

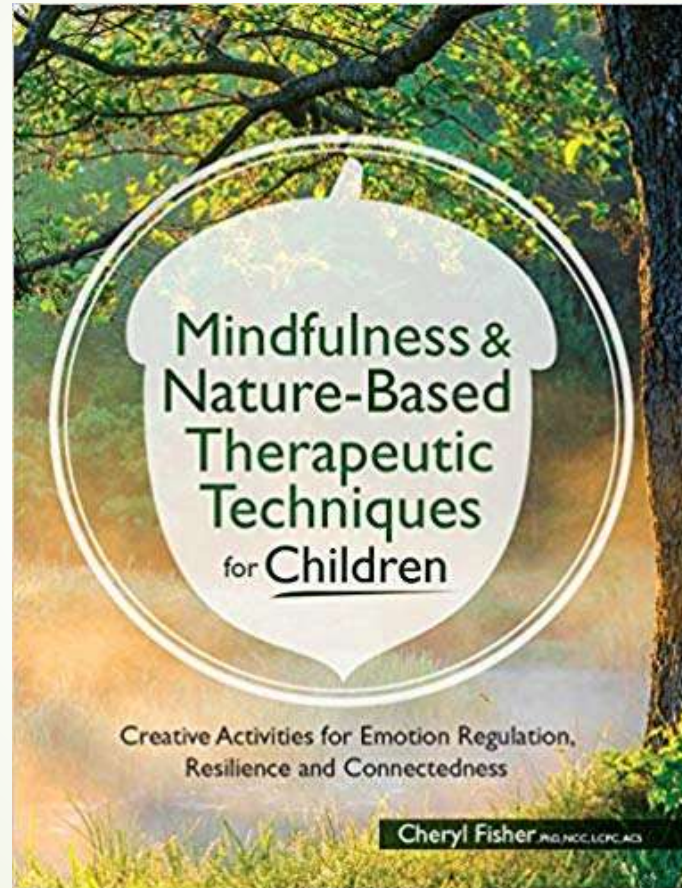
Presents with anxiety about possibly dating soon. States that she feels depressed and hopeless.

Afraid of physical contact.

Eco-culture: Lives on a farm and loves her animals, water, and hiking.

“ My innocence was stolen. Who will love me?”

For More Information...







# References

- ▶ Fisher, C. (November 27, 2017) The Counseling Connoisseur: Eco-culture: Clinical application of nature-informed therapy. *Counseling Today Online*.
  - ▶ Fisher, C. (2019). *Mindfulness and Nature-Based Therapeutic Techniques for Children*. PESI Publishing.
  - ▶ Van der Kolk, B. (2015). *The body keeps the score: Brain, mind and body in the healing of trauma*. Penquin Books
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