TRAUMA, THE BRAIN AND SUBSTANCE USE

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Trauma Ambassador

• Therapist: New Pathways Counseling: treating C-PTSD; co-occurring disorders
• Educator: public speaking, training and supervision
• Activist: Founder of Restoration Mind Center
What is trauma?

Trauma occurs when a person perceives an event or set of circumstances as extremely frightening, harmful, or threatening—either emotionally, physically, or both.

“Not just about the memory, but how you process the information. See the world and react to the world in a different way. Present reality has changed. See people differently. Hard to love people and hard to engage in life and hard to have pleasure, and body plays tricks with you.”

Dr. Bessel van der Kolk
What is PTSD?

• Post-traumatic stress disorder is classified as a disorder that develops after an individual experiences a chronic or acute stressor, one that usually involves the threat of serious injury or death to oneself or to someone nearby (American Psychiatric Association 2013).
What is trauma?

**Acute** = Single incident

- Violent assault (shooting, sexual)
- Witnessing an event (environmental)
- Natural disaster

**Chronic** = Repeated

- Community violence
- Racial marginalizing
What is trauma?

• Physical – directly done to the body
• Sexual – unwanted/violent sexual contact
• Verbal – words spoken that wound
• Emotional abuse – both commission or omission
Emotional Abuse

- Belittling or shame – uses intimidation or humiliation to control
- Violent in discipline – obey or be injured
- Blamed for family issues – always their fault
- Excessive demands or responsibilities beyond known ability
- Unpredictable/inconsistent responses
- Unhealthy boundaries/over-control that is inappropriate for situation
- Isolated: does not allow questioning
Generational Trauma

• Epigenetics refers to changes in how an individual’s genes are expressed and used, which may be temporary or permanent
  • National Scientific Council on the Developing Child, 2010
• These changes can be experienced *in vivo*
• Can also be environmental
What is developmental trauma?

Emotional Abuse/Developmental Trauma

- Caregiver belittles or shames child – uses intimidation or humiliation to control
- Caregiver is violent in discipline
- Caregiver blames child for family issues – always their fault
- Caregiver has excessive demands requiring adult behaviors or responsibilities or emotional responses (role reversal or parentifying)
- Caregiver is unpredictable
- Caregiver has unhealthy boundaries/over-control that is inappropriate for age
- Caregiver isolates: does not allow healthy age-appropriate socialization
Neglect

“Chronic neglect is associated with a wider range of damage than active abuse, but it receives less attention in policy and practice.”

https://developingchild.harvard.edu/science/deep-dives/neglect/
What is developmental trauma?

Neglect

Caregiver not physically present
- Forced (hospitalization/incarceration/military service)
- Choice (addiction/work commitments/other family)
- Caregiver not emotionally present or physically abandons
  - Mental illness (depression, dissociation, bipolar disorders, developmental delays, TBIs)
  - Physical illness
  - Grief
  - Extreme stress (poverty, unsafe neighborhood/home)
  - Ignores child (Addiction, self-absorbed)
  - Leaves or isolates
Adverse Childhood Experiences Scale (ACES)

• ACEs refers to a group of traumatic experiences in childhood, including maltreatment, that can cause toxic stress and affect an individual’s physical, psychological, and behavioral well-being.

• Between 1995 and 1997, the CDC, in collaboration with Kaiser Permanente’s Health Appraisal Clinic, conducted the landmark ACEs study, which examined the correlation between childhood trauma and adult health and well-being outcomes. It is an ongoing study measuring the causes of toxic stress in childhood that affect an individual’s well-being.

• Findings from a subsequent study showed that nearly half of children in the United States experienced at least one ACE and that about 1 in 10 had experienced three or more ACEs (Sacks & Murphey, 2018).

• https://www.cdc.gov/violenceprevention/acestudy
ACEs Questions Summary

- Physical abuse (Saw/heard/experienced)
- Abandonment (Emotional/professional/legal/death/divorce)
- Poverty
ACEs in Colorado (2011/2012)

<table>
<thead>
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<th></th>
<th>0 ACEs</th>
<th>1 ACE</th>
<th>2 ACEs</th>
<th>3 to 8 ACEs</th>
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<td>24</td>
<td>11</td>
<td>10</td>
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<tr>
<td>CO</td>
<td>55</td>
<td>23</td>
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ACEs Findings

Neglect Is the Most Prevalent Form of Child Maltreatment

![Bar chart showing neglect is the most prevalent form of child maltreatment](image)


Center on the Developing Child, Harvard University

www.developingchild.harvard.edu
Neurobiological Consequences of Childhood Maltreatment (2007)

Population attributable risk associated with early adversity:

- 50% for drug abuse
- 54% for current depression
- 65% for alcoholism
- 67% for suicide attempts
- 78% for iv drug use.

Why trauma when discussing addiction?

- Adults who had been maltreated as children are at a significantly higher risk of substance use disorders than adults who have not been maltreated

  - (LeTendre & Reed, 2017); (Choi, DiNitto, Marti, & Choi, 2017)
Adverse Childhood Experiences scale (ACEs)

- 2003, Pediatrics Journal reported:
  
  “ACEs seem to account for one half to two thirds of serious problems with drug use.”

## ACEs Scores for Drug Usage in CO (2011/2012)

<table>
<thead>
<tr>
<th>United States</th>
<th>Hard to cover basics like food or housing somewhat or very often</th>
<th>Parent or guardian divorced or separated</th>
<th>Lived with anyone who has a problem with alcohol or drugs</th>
<th>Lived with anyone mentally ill, suicidal, or severely depressed</th>
<th>Parent or guardian served time in jail</th>
<th>Saw or heard parents or other adults slap, hit, kick, or punch in home</th>
<th>Parent or guardian died</th>
<th>Victim of or witness to violence in neighborhood</th>
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<tr>
<td>CO</td>
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</table>
Substance Abuse Cycle

• Substance abuser is neglectful and possibly emotionally/physically/sexually abusive
• To avoid trauma consequences of abuse, many turn to numbing out
Trauma and the Brain

• Sympathetic vs. Parasympathetic

• Amygdala (Autonomic Nervous System)
  • Alarm system (Hyper vs hypo aroused)

• Prefrontal cortex
  • Executive functioning/decision making (Rational thought)
Jana Pressley, PsyD Director of Education & Professional Development
The Trauma Center at JRI
Trauma and the Brain

Recalling trauma pretreatment – highly activated

Post Treatment – calm brain
Behaviors

- Do not feel safe
- Leads to hypervigilance and avoidance (numbing out/isolating)
  - Substance use
  - Dissociation
  - Addiction
  - Agoraphobia
- Controlling behavior
  - OCD
  - Eating disorders
  - Micromanage their environment
Common coping strategies/adaptations used

- Substance abuse
- Sex
- Isolating/avoidance
- Shutting down – completely checking out
- Aggression
- Self injury - Head banging/punching
- Rhythmic Movement
- Clinginess
Neuroplasticity – Brain’s ability to change
Healing Trauma = Whole Body Approach
Therapeutic/Counseling Changes

- Eye Movement Desensitization Reprocessing
- Neurofeedback
- Somatic Work
- Art Therapy
- Drama Therapy
- Trauma Yoga
- Acceptance and Commitment Therapy (ACT)
- Mindfulness/meditation
Basic Therapeutic Focus

• Building resilience
• Building relationships & social skills
  • Groups
• Building routine – sleep and basic skills
Additional Research

Pharmaceuticals

“The long-term changes that can be induced in adulthood by drugs that target epigenetic mechanisms have exciting implications for potential treatment options for PTSD.”

Additional Research

Psychedelic Drugs
• MDMA
• Psilocybin
• LSD
• Ayahuasca
Societal/Policy Changes

Resilience

Foundation of Resilience:
• Supportive relationships
• Adaptive skill-building, and
• Positive experiences

Core to Preventing Trauma

Attachment and Resilience

• Mentorship – life coaching for healthy communication and attachment
• Parenting – home visit programs to coach new parents on childcare and healthy discipline
• Community partnering – coordinate therapeutic interventions for substance abuse or mental illness with high-quality early care and education.

Therapeutic/Counseling Changes

• Beyond trauma informed to trauma trained
  • Educated community health care programs/workers
  • Partnering/networking
  • Trained clinicians
Networking

- Resource listing for trauma
- Accredited trauma trained clinicians/physicians/prescribers
- Treatment center’s focused on developmental trauma C-PTSD not just PTSD
Q&A

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