Through The Lens of Trauma

Purpose of the training

- Gain a greater understanding of how chronic trauma affects the developing brain
- Gain a greater understanding of how trauma has affected multiple areas of functioning
- Examine strategies designed to help children regulate and begin to heal from trauma
Defining Trauma

What is The cost of Trauma?

- It is estimated that over 42 billion dollars is spent annually dealing with the effects of childhood trauma
- Childhood trauma affects schools, CPS, probation, welfare, essentially all social service systems

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Defining Trauma

Who Is Affected By Trauma

- It is estimated that approximately 1 in 4 adults has experienced physical abuse
- 1 in 8 have experienced some form of sexual abuse as a child
- Trauma affects individuals from all socioeconomic and cultural backgrounds
Defining Trauma

**What Is Trauma?**

**DSM IV Definition of Trauma:**

An *event* involving actual or threatened death, serious injury, or threat to physical integrity. The individual’s response includes intense fear, horror, or helplessness.
Defining Trauma

“Overwhelming demands placed upon the physiological system that result in a profound sense of vulnerability or loss of control.”

R.D. Macy
## Defining Trauma

### Acute Trauma
- Accident
- Rape
- Natural Disasters
- Sudden loss of loved one
- Violent assault

### Chronic Trauma
- Ongoing sexual abuse
- Neglect (0-6)
- Emotional abuse
- War/Terrorism
- Some types of physical abuse
Defining Trauma

- Chronicity is perhaps the most important factor in how trauma will affect the developing child.
- Age is perhaps the next most important factor in how affected the child may be through the lifespan.
Defining Trauma

**COMPLEX TRAUMA**

Complex trauma is both chronic abuse and neglect of a child and the immediate and long-term effects of that abuse.

Complex Trauma is not an official DSM diagnosis........yet
Defining Trauma

**COMPLEX TRAUMA**

- Complex Trauma often results from the chronic abuse or neglect at the hands of the primary caregiver.
- Because of this, there are impairments that affect the developing brain of the child.
- These impairments are the brain’s attempt to soothe, cope, and protect the child.
Defining Trauma

Areas Affected By Complex Trauma

- **Attachment:** Most children who have complex trauma have disorganized attachment patterns

- **Self-Regulation:** The inability to regulate affect which is seen as either hyper-arousal, dissociation, or both.

- **Cognition:** Memory problems, difficulty with planning, impulsivity, academic difficulties

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Defining Trauma

Areas Affected By Complex Trauma

- **Self Concept**: Altered sense of self in comparison to the world around them arises partially from the ability to accept a single reality during childhood.

- **Behavioral Regulation**: Behavioral patterns that are either over-controlled, under-controlled, or both.
Trauma's Effect on the Developing Brain
Trauma's Effect on the Developing Brain

3 Year Old Children

Normal

Extreme Neglect
Trauma's Effect on the Developing Brain

Key Areas Impacted

- Right Brain Development
- Brain Stem
- Limbic System
- Neocortex
- Cortisol and Norepinephrine levels
- Corpus Collosum
Trauma's Effect on the Developing Brain
**Hierarchy of Brain Function:** The human brain is organized from the most simple (e.g., fewest cells: brainstem) to most complex (e.g., most cells and most synapses: frontal cortex). The various functions of the brain, from most simple and reflexive (e.g., regulation of body temperature) to most complex (e.g., abstract thought) are mediated in parallel with these various areas. These areas organize during development and change in the mature brain in a ‘use-dependent’ fashion. The more a certain neural system is activated, the more it will ‘build in’ this neural state — creating an internal representation of the experience corresponding to this neural activation. This use-dependent capacity to make internal representations of the external or internal world is the basis for learning and memory.
Brain Development

- The brain develops in a hierarchical fashion from most primitive to most complex, from the bottom up, from the middle out.

- The development of the brain is dependent on genetic potential as well as the impact of the environment.

- Pathways in the brain develop in a “use dependent” fashion, the more a pathway is used the more entrenched it becomes.

- The first areas to develop are primarily responsible for survival.

Shore, 2006
Brain Development

- The child's ability to self-soothe and to regulate affect begins in infancy with the mother-child interaction.
- The interactions with the primary caregiver set the stage for the normal or abnormal development of many systems in the brain.
- Memories at this early age are “state dependent” meaning that they are in the form of sensations (touch, taste, feel, smell).
- Chronic trauma beginning at an early age dramatically affects all of these processes.

Shore 2006; Perry 2000
Limbic System

- The brain’s alarm system
- Tells the brain when there is a threat and evaluates it (smoke detector)
- Sends a message to the brainstem to react (alarm)
- Flight, Fight, Freeze response occurs
- Neocortex evaluates if it is a true threat (real alarm/false alarm)
- Neocortex shuts off the alarm system or plans for next action
- This is the functioning of a normal alarm system
- The limbic system and brainstem are the primitive brain and are designed for survival of the individual
- If this system is chronically activated.............
Limbic System

- Chronic threat at an early age produces permanent changes in the alarm system
- The amygdala becomes oversensitive and responds to neutral stimuli as well as reminders of trauma (triggers)
- This creates a child whose alarm system rings when there is no threat
- When an alarm rings, whether real or false, the “thinking brain” shuts off
Limbic System

**AMYGDALA**

Responsible for the evaluation of emotional meaning of incoming stimuli (Ledoux, 1986)

When activated it assigns meaning to an event then sends signals to different areas of the brain for either action or further evaluation

Thought to integrate internal representations of the external world in the form of memory images with strong emotion

Animal studies show that high-level stimulation of the amygdala interferes with evaluation and categorization of experience.

Van der Kolk, 1996
Neocortex (thinking brain)

- The most slow to develop of the brain regions, about age 25
- Responsible for executive functioning, evaluation, and turning off the limbic system and brainstem when triggered.
- When an individual experiences a trauma the brain mobilizes all its resources to the “back/middle brain” leaving the thinking brain dormant
- Broca’s area, responsible for putting language to sensory experiences, shuts off during trauma.

Van der kolk, 1996
Part of the purpose of the thinking brain is to modulate the threat response by turning off the alarm system.

Children with CT have decreased functioning of the NC, so the inhibition is decreased.

Perry, 2000
Hippocampus

- Chronic threat and activation of the threat response system produces high levels of cortisol
- Cortisol damages brain tissue
- In traumatized children there is a 13 percent reduction in the size of the hippocampus (van der kolk, 1996)
- This affects: The consolidation of memory, regulation of arousal
KEY POINTS

- The threat system is comprised of three parts, brain stem, limbic system, and the neocortex.
- The brain develops from most primitive to most complex.
- Trauma during development creates an oversensitive alarm system.
- The neocortex shuts off when alarm system is on.
- Traumatized children have an overactive alarm system so they do not access the thinking brain as often or as effectively.
KEY POINTS

- The alarm system is often set off by neutral stimuli.
- Children often lose declarative speech when suffering trauma, so when triggered don't have ability to describe experience.
- **THE MOST DESTRUCTIVE PART OF CHRONIC TRAUMA IS THE IMPAIRED ABILITY TO REGULATE AFFECT.**
- Here's the proof..................
Brain response to trauma script in controls and individuals with PTSD
Adaptive Responses: Framing The Behaviors You See
Adaptive Responses

- Adaptive Responses: The behavioral and physiological patterns that emerge from the traumatized brain.
- These are adaptive only for a short time, as the child develops, they often become maladaptive.
- Many of the most common (and difficult) behaviors seen in the classroom are adaptive responses to trauma.
- Remember: The purpose of an adaptive response is to PROTECT the individual and is often beyond the child's awareness!!
Adaptive Responses

**Dissociative**
- Freeze response to triggers
- Brain's attempt to avoid threat, pain, helplessness
- Seen as: shutting down, ODD, spacing out, losing time, cutting, loss of speech, decrease in movement
- Internal experience still aroused

**Hyper-aroused**
- Fight/Flight response to triggers
- Over-react to neutral stimuli
- Seen as: Aggression, rapid speech, inattention, running away, arguing, yelling, controlling, hate rules, ODD, Conduct d/o, ADHD
- Internal experience still aroused
Adaptive Responses

Why is it helpful to see behaviors as adaptive responses to trauma?

1. It de-moralizes and de-personalizes the behavior
2. It is more consistent with what is probably occurring in the brain of these children
3. It allows for effective, appropriate, and hopefully more successful interventions
4. It allows us to have a much better idea of the areas of the brain that may be functioning irregularly.
Adaptive Responses

Case Example: Buddy is a 12 year old in an ED classroom with a history of severe physical abuse by mother until age 6 when he was removed from the home. Buddy was also the youngest of 7 children and was targeted by his siblings. During the time he was an infant Buddy’s mother was actively using substances. Although he was not sexually abused, his siblings were by their father.

- What are possible adaptive responses?
- What may be impairments to learning?
What Works and What Doesn’t With Traumatized Youth
Helping Children Heal

- Try to understand the function of the behavior
- Try to understand that they have often lived much of their lives in trauma, it takes time to heal
- These responses are due to brain change, healing in a very real sense occurs through brain change as well
- Make goals with traumatized children small (i.e., instead of being a 10 get them to an 8)
- The relationship is necessary, but not sufficient for change
- It takes a village!
Helping Children Heal

Keys to Healing From Trauma

1. SAFETY
2. SELF-REGULATION
3. SELF-REFLECTIVE INFORMATION PROCESSING
4. TRAUMATIC EXPERIENCES INTEGRATION
5. RELATIONAL ENGAGEMENT
6. POSITIVE AFFECT ENHANCEMENT

COOK, et al 2005
Helping Children Heal

**BUILDING ATTACHMENTS:**

1. Point out the process
2. Use physical touch
3. Mirror and have the child mirror you
4. Validate ALL feelings
5. Follow the leader games
6. Simon Says
7. Get down to the child’s physical level
8. Be genuine, don’t try too hard
9. **BE AWARE OF YOUR OWN LEVEL OF AROUSAL**
10. Have them guess things about what you are thinking & feeling
11. Develop activities that are in line with the child’s developmental level when they are triggered.
Healing From Trauma

SELF-REGULATION:
1. Identify affect FOR the child “I can see you’re scared right now…”
2. Give children words when they don't have them
3. Reward identifying affect in self and others
4. Build in awareness of degrees of feeling
5. Don't try to teach when kids are dysregulated, lessons won't be learned
6. Work with the body, i.e games that teach up regulation/down regulation
7. Give kids time to recover after being triggered
8. Children under 8 tend to need to be regulated externally
Healing From Trauma

Building Competency:

1. Build belonging in the classroom
2. When child regulated, practice planning/problem solving
3. Allow them to tell their story, don't prompt it
4. Encourage story telling, even if it's scary
5. Positive, positive, positive
6. Find strengths and develop them
Healing From Trauma

What doesn't work

1. Anger Management: Why Not with traumatized kids?
2. Reasoning: When does this not work with trauma?
3. Power Struggles: They are insidious
4. Time-out: In it’s current form
5. Taking away points/privileges
6. Talking during meltdown
7. Punching a Pillow

Melrose 2006
Healing From Trauma

What Does Work?

1. A Quiet safe place
2. Compassionate containment: Being close to a safe adult
3. Caring, CALM teachers
4. Boundaries, rules, regulations, and predictable logical consequences
5. Opportunities to earn rewards that will not be taken away
6. Time-away
7. Few words

Melrose, 2006
8. Chances to start over

9. Positive acknowledgement and encouragement

10. Bodily sensations as resources

11. Communication with parents and others about the child that emphasize strengths

12. Collaboration with the child's caregiving system

13. Developing small, identifiable goals that are trauma informed (i.e., moving from an 8 level of anger to a 6).

14. Reward the ability to regulate or accept regulation, not the behavior