Impact of Trauma

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Illinois Childhood Trauma Coalition
Learning Objectives

1. Be able to give one example of a one-time traumatic event and a chronic or repeated event.

2. Be able to describe how a traumatic event is experienced.

3. Be able to name at least two long-term effects of childhood trauma.
Brain Development
A Review
Complexity & Hierarchy of Brain Functioning

- Cortex
- Limbic
- Midbrain
- Brainstem

Complexity and Plasticity

- Abstract Thought
- Concrete Thought
- Affiliation
- “Attachment”
- Sexual Behavior
- Emotional Reactivity
- Motor Regulation
- “Arousal”
- Appetite/Satiety
- Sleep
- Blood Pressure
- Heart Rate
- Body Temperature
Baby Development

• Physical - Crawling, walking, running
• Emotional - Watching, smiling, attachment
• Cognitive (thinking) - Talking, listening
And what about memory?

Same pattern:

- Motor memory & physical
- Emotional memory & emotional
- Both before cognitive memory (which takes words)
Teenage Development

- Physical Appearance
- Emotional rollercoaster
- Cognitive – always the last

A teenager’s physical development will often occur **AHEAD** of their emotional or cognitive development.
I'm with stupid.
Still, in other words

- Adolescence is like giving a teenager a car with:
  - A new body with a lot of horsepower *(physical)*;
  - A gas pedal that can go from 0 – 60 mph in a few seconds *(emotional)*;
  - A brake system that is still being worked on *(cognitive)*;
Impact of Trauma
What is Childhood Trauma?

The experience of an event by a child that is emotionally painful or distressful which often results in lasting mental and physical effects.

~ National Institute of Mental Health

- **Event** – One time or chronic
- **Experience** – whether the event is experienced as scary or threatening
- **Effect** – long-lasting and life altering
Event

• Could be a single event
  - Accident
  - Illness (especially with invasive procedures)
  - Natural Disaster
• Could be repeated or chronic events or repeated exposure
What are the Adverse Childhood Experiences (ACEs)?

Growing up (prior to age 18) in a household with:

- Recurrent physical abuse
- Recurrent emotional abuse
- Sexual abuse (single episode or recurrent)
- Emotional or physical neglect
- An incarcerated household member
- Someone who was chronically depressed, mentally ill, institutionalized, or suicidal
- Mother was treated violently
- One or no parents
- An alcohol &/or drug user in the household
What They Found

Of the 17,000 respondents

✓ 1 in 4 exposed to 2 categories of ACEs
✓ 1 in 16 was exposed to 4 categories
✓ 22% were sexually abused as children
✓ 66% of the women experienced abuse, violence or family strife in childhood
✓ Women were 50% more likely than men to have experienced 5 or more ACEs
Events Beyond ACES

• Poverty

• Being a victim of crime

• Community violence

• A household member(s) active or was active in the Military/National Guard
Experience

- Definition says “emotionally painful or distressful”

- Scary or threatening *long afterward*

- Age matters – What is threatening for a 3 year old may not be threatening to a 15 year old
Effects: Trauma and Alarm

- A child’s brain development responds to the child’s experiences
- Alarm System as a Survival Mechanism
- Extreme or frequent threats can damage the alarm system
- With trauma, the alarm system is too easily triggered and too slow to shut down
Effects: Trauma and Triggers

After Trauma

• Youth are on **Constant Alert**
• Youth may over-interpret signs of **Danger**
• Youth overreacts to normal situations
Effects: Back to experience

- What did she/he see?
- What did she/he hear?
- What did she/he smell?
- What did she/he taste?
- What did she/he feel (touch)?
## Perry: Dominant Response Types

<table>
<thead>
<tr>
<th>Hyper arousal</th>
<th>Dissociation</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Flight or Fight</td>
<td>• Freeze/Numb</td>
</tr>
<tr>
<td>• Hyper-vigilant</td>
<td>• Overwhelmed</td>
</tr>
<tr>
<td>• Easily Offended</td>
<td>• Nonresponsive</td>
</tr>
<tr>
<td>• Over-reactive</td>
<td>• Self-Mutilation</td>
</tr>
<tr>
<td>• Avoidant</td>
<td>• Passing Out</td>
</tr>
</tbody>
</table>
Trauma and Perception

- Some of the brain changes that we have discussed have a direct impact on how the brain processes information.

- Youth with exposure to trauma may have heightened reactivity to loud sounds, intrusions into personal space, and facial expressions.
Physically Abused Children See Anger Where Others See Fear

Graphic by: Seth Pollak, courtesy PNAS
Post Traumatic Stress Disorder

SIMPLE DEFINITION:
Experience of or witness to an event that involves actual or threatened death, injury or threat to physical integrity of self and/or others.

- Re-experiencing
- Avoidance
- Arousal and Reactivity Symptoms
- Negative Cognitions or Moods
Re-Experiencing

Symptoms

• Nightmares, difficulty sleeping
• Thinking about trauma frequently
• Acting or feeling that the event was reoccurring (i.e. “flashbacks”)
• Psychological distress and/or physical reaction when exposed to cues that symbolize or resemble an aspect of the traumatic event

Observable Behavior

• Fatigue
• Sleepiness
• Tearfulness and trouble concentrating
• Decline in academics or behavior
Avoidance

**Symptoms**
- Not wanting to think/talk about trauma
- Avoidance of places, people, or conversations associated with the trauma
- Inability to recall important aspects of the trauma
- Diminished interest or participation in activities
- Feeling of detachment from others
- Restricted range of affect
- Sense of foreshortened future

**Observable Behavior**
- Trouble sitting still
- Getting mad if someone asks about the incident
- Constantly creating distractions
- Resistance to doing certain things, going certain places
- Absenteeism
- Withdrawal
- Substance use
Arousal and Reactivity

 Symptoms
• Feeling out of control
• Hypervigilance; being on guard
• Having physical problems or complaints
• Sleep difficulties
• Irritability or angry outbursts
• Difficulty concentrating
• Exaggerated startle response

 Observable Behavior
• Easily upset, startled, or scared; tearful
• Exaggerated attention to detail; strong reactions to small things
• Increased aggression or fighting
• Somatic complaints: headaches, stomachaches, etc.
### Negative Cognitions or Mood

#### Symptoms
- Persistent and distorted sense of blame to self or others for the event
- Persistent and distorted sense of anger, shame, guilt, or sadness
- Estrangement from others
- Markedly diminished interest in activities
- Inability to remember key aspects of the event

#### Observable Behavior
- Social withdrawal
- Moodiness
- Somatic complaints: headaches, stomachaches, etc.
- Negative statements about the future or negative self-statements
- Unwillingness to take risks or try new things
- Flat affect
Chronic Stress & Complex Trauma

Symptoms
- Difficulty forming attachments & self regulation
- Lack of empathy
- Emotional reactivity
- Disturbance in sense of self

What You May Observe
- Relationships can be conflictual:
  - Clingy, hot-n-cold
  - Misinterpret social interactions
  - Over-reacts to minor events
  - Power struggles
- Sexualized or provocative behavior
- Poor self-esteem
## Symptoms that Overlap with Child Trauma & Mental Illness (AACAP, 2010)

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Overlapping Symptoms</th>
<th>Trauma</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Anxiety Disorders</td>
<td>Avoidance of feared stimuli, physiologic and psychological hyperarousal upon exposure to feared stimuli, sleep problems, hypervigilance, and increased startle reaction</td>
<td>Child Trauma</td>
</tr>
<tr>
<td>2. Attention Deficit / Hyperactivity Disorder</td>
<td>Restless, hyperactive, disorganized, and/or agitated activity; difficulty sleeping, poor concentration, and hypervigilant motor activity</td>
<td>Child Trauma</td>
</tr>
<tr>
<td>3. Bipolar Disorder</td>
<td>Hyperarousal and other anxiety symptoms mimicking hypomania; traumatic re-enactment mimicking aggressive or hypersexual behavior; and maladaptive attempts at cognitive coping mimicking pseudo-manic statements</td>
<td>Child Trauma</td>
</tr>
<tr>
<td>4. Major Depressive Disorder</td>
<td>Self-injurious behaviors as avoidant coping with trauma reminders, social withdrawal, affective numbing, and/or sleep difficulties</td>
<td>Child Trauma</td>
</tr>
</tbody>
</table>
# Symptoms that Overlap with Child Trauma & Mental Illness (AACAP, 2010)

<table>
<thead>
<tr>
<th>DSM Diagnosis</th>
<th>Overlapping Symptoms</th>
<th>Trauma</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Oppositional Defiant Disorder</td>
<td>A predominance of angry outbursts and irritability</td>
<td>Child Trauma</td>
</tr>
<tr>
<td>6. Panic Disorder</td>
<td>Striking anxiety and psychological and physiologic distress upon exposure to trauma reminders; avoidance of talking about the trauma</td>
<td>Child Trauma</td>
</tr>
<tr>
<td>7. Psychotic Disorder</td>
<td>Severely agitated, hypervigilance, flashbacks, sleep disturbance, numbing, and/or social withdrawal, unusual perceptions, impairment of sensorium and fluctuating levels of consciousness</td>
<td>Child Trauma</td>
</tr>
<tr>
<td>8. Substance Abuse Disorder</td>
<td>Drugs and/or alcohol used to numb or avoid trauma reminders</td>
<td>Child Trauma</td>
</tr>
</tbody>
</table>
## Percentage of Illinois Children with Trauma Experiences, Trauma Symptoms & Potential PTSD

<table>
<thead>
<tr>
<th>“Child Trauma”</th>
<th>0 – 6 years old</th>
<th>7 - 12 years old</th>
<th>13 – 17 years old</th>
<th>17+ years old</th>
<th>All Children</th>
</tr>
</thead>
<tbody>
<tr>
<td>1a. Any Suspected Traumatic Event</td>
<td>93%</td>
<td>98%</td>
<td>98%</td>
<td>98%</td>
<td>95%</td>
</tr>
<tr>
<td>1b. Any Actionable Traumatic Event</td>
<td>70%</td>
<td>83%</td>
<td>84%</td>
<td>88%</td>
<td>76%</td>
</tr>
<tr>
<td>2. Any Trauma Symptom</td>
<td>15%</td>
<td>42%</td>
<td>51%</td>
<td>57%</td>
<td>28%</td>
</tr>
<tr>
<td>3. Potential PTSD</td>
<td>1%</td>
<td>4.5%</td>
<td>6%</td>
<td>7% (McMillen 8%)</td>
<td>3%</td>
</tr>
</tbody>
</table>
Long-Term Effects (ACES)

Exposure to Trauma Increases the Risk for:

- Major Mental Illness
- Substance Abuse
- AIDS and Sexually Transmitted Diseases
- Academic Difficulties
- Impaired Physical Health
ACES Study Data

**Childhood Experiences Underlie Chronic Depression**

<table>
<thead>
<tr>
<th>ACE Score</th>
<th>% With a Lifetime History of Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Women: 10% Men: 15%</td>
</tr>
<tr>
<td>1</td>
<td>Women: 20% Men: 25%</td>
</tr>
<tr>
<td>2</td>
<td>Women: 30% Men: 35%</td>
</tr>
<tr>
<td>3</td>
<td>Women: 40% Men: 45%</td>
</tr>
<tr>
<td>&gt;=4</td>
<td>Women: 50% Men: 55%</td>
</tr>
</tbody>
</table>
ACES Study Data

Childhood Experiences Underlie Suicide

% Attempting Suicide

ACE Score

0 1 2 3 4+

20 18 16 14 12 10 8 6 4 2 0
ACES Study Data

Childhood Experiences vs. Adult Alcoholism

% Alcoholic

ACE Score

0 1 2 3 4+

0 2 6 10 16 18
ACES Study Data

Adverse Childhood Experiences vs. History of STD

Adjusted Odds Ratio

ACE Score
ACE Study
Influence on Health and Well-being over the Lifespan

- Adverse Childhood Experiences
- Disrupted Neurodevelopment
- Social, Emotional and Cognitive Impairment
- Adoption of Health Risk Behaviors
- Disease, Disability, Social Problems
- Early Death

From Conception to Death
Long-Term Effects
Perry, 2002

3 Year Old Children

Normal

Extreme Neglect
A Wise Man Told Us

“Risk Factors Are Not Predictive Factors Because of Protective Factors”

~ Carl Bell, M.D.
Trauma & The Brain – Some Key Concepts from Bruce Perry, MD

• Resilience - Not everyone exposed to adverse experiences is traumatized

• Recovery - Brains respond to repeated stimuli; use-dependent development

• Even as adults, brains capable of learning and changing