The Impact of Trauma on Children

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National Child Traumatic Stress Network Sites

Category I - National Center
- LOS ANGELES
- MA
- CT
- NY
- PA
- NM
- UT
- CO
- MO
- OH
- VA

Category II – Intervention, Development, and Evaluation Centers
- ME
- FL
- AL
- CA
- OR
- WA
- IL
- DC
- NC

Category III – Community Treatment and Service Centers
- DURHAM
- OK
- MT
- ID
- WI
- MI
- SC
- NJ
- MD
- TX
- TN
- GA
- LA
- MS

FY01-02 – Member Centers
- SAN DIEGO
- SAN FRANCISCO
- PORTLAND
- EUGENE
- LOS ANGELES
- SAN DIEGO
Outline

- What is Trauma?
- What does Trauma look like?
- The Physiological Impact of Trauma on the Child
  - Trauma and the Brain
  - Trauma and Attachment
Definition of Trauma: DSM-IV

[An] event involving actual or threatened death, serious injury, or threat to physical integrity. The individual’s response includes intense fear, horror, or helplessness.
What is “Trauma”?:

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

R.D. Macy
PTSD

- Three Diagnostic Clusters for Post-Traumatic Stress Disorder
  - Intrusive Re-experiencing
  - Avoidance
  - Hyper-arousal
Problems with the Traditional Perspective on Trauma

- Developed entirely from an adult perspective
- Developed primarily in response to trauma responses in Vietnam War veterans
- Focuses on the event – not the person
- Perspective is everything – trauma is a subjective experience
“Events are never ‘traumatic’ just because they meet a threshold criterion.”

Arieh Shalev, M.D.
Most soldiers in combat encounter severe stress
- Most have short-term stress reactions
- However, most recover while some develop PTSD
Most common types of trauma are interpersonal

Most traumatic events happen in the home

Most traumatic events involve family members

Children experience trauma at a younger age than most people expect

Most children who have long-term difficulties are exposed to multiple traumas
Child Abuse and Neglect, 1995

- Child Abuse Fatalities 2000
  - Serious Injuries 565,000
  - Children Confirmed as Abused and Neglected 1.1 Million
  - Children Reported for Abuse and Neglect 3.0 Million

Source: CWLA Stat Book, 1997
Complex Trauma in the National Child Traumatic Stress Network

Bessel van der Kolk, M.D., Joseph Spinazzola, Ph.D., Julian Ford, Ph.D., Margaret Blaustein, Ph.D., Melissa Brymer, Psy.D., Laura Gardner, BsPH, Susan Silva, Ph.D., Stephanie Smith, Ph.D.
Complex Traumatic Exposures

- Aggregate data on 1,699 children served across 25 sites within the National Child Traumatic Stress Network reveals that 78% of these children have been exposed to multiple and/or prolonged trauma.

Child Trauma Exposure: Age of Onset in NCTSN

- Mean Age of Onset: 5.0 (SD = 2.8)
  - Median: 5.0
  - Min, Max: 0, 13.0

Early Exposure: Over 1/3 of the sample is adolescent and yet 98% of clinicians surveyed report average age of onset under 11
Year One

PET Scans Showing Increasing Brain Metabolic Activity: Birth to One Year of Age

Images by Harry Chugani
Science Vol 288, June 23, 2000
OhioCanDo4Kids.org - 2006
Brain Growth

Newborn  6 Year old  Newborn  6 Year old

OhioCanDo4Kids.org - 2006
Growth of the Human Brain from birth to 20 years

FIGURE 1.1. Growth of whole brain compared when mature weight is taken at 12.5 years and at 20 years. Note the accelerated growth in the first 2 years. (From Himwich.)
Sensitive Period for a Second Language Declines after Age 7 and Ends by Late Adolescence

Immigrant scores on a language test decline with the age at which they were first immersed in English.

Science, Vol 288, 23 June 2000, p 2119
OhioCanDo4Kids.org - 2006
Child Trauma History: Most Frequent Exposure Types

- CEA: 59.3%
- Loss: 55.6%
- Impaired Caregiver: 47.1%
- DV: 45.8%
- CSA: 40.8%
- Neglect: 33.8%
- CPA: 28.1%
- War/Terrorism (U.S.): 18.4%
Child Trauma History: Less Frequent Exposure Types

- Injury/Accident: 6.2%
- Illness/Medical: 5.7%
- Disaster: 3.0%
- War/Terrorism (Intl.): 2.8%
- Forced Displacement: 1.6%

Child Trauma History: Less Frequent Exposure Types
Relationship of Victims to Perpetrators in Substantiated Cases

Source: CWLA, 1997
Complex Posttraumatic Sequelae: Most Frequent Difficulties

- Affect Dysregulation: 61.5%
- Attention/Concentration: 59.2%
- Negative Self-Image: 57.9%
- Impulse Control: 53.1%
- Aggression/Risk-taking: 45.8%
The Human Brain:

- Cerebrum
- Thalamus
- Hypothalamus
- Amygdala
- Hippocampus
- Pons
- Cerebellum
- Medulla oblongata
- Spinal cord

Blaustein 2004
Trauma and the Child’s Brain

- How the Brain responds to Trauma
  - Limbic system response “the alarm system”
  - Fight, Flight or Freeze
  - Adaptive Nature of Stress Response
Brain Activation During Acute Stress

- Acute stress (trauma) activates limbic system “back” or “primitive brain”

- This part of the Brain regulates basic (non-cognitive functions, breathing, heart rate, digestion and instinctive responses)

- While in this mode, instinctive fight, flight or freeze responses take over.
How the brain responds to memories of trauma:

- When people are exposed to memories of traumatic events, brain scans show: (Rauch, van der kolk, Fisler, & Alpert, 1996)
  - Activation of the survival response:
    - Heightened amygdala and other limbic activity
  - Not just a memory--Seeing and feeling
    - Activation of sensory areas
  - Inability to speak:
    - Decreased activation of Broca’s area
  - Emotions are more important than language:
    - Marked Rt. hemisphere lateralization
Child Responses to Trauma

- Fight, Flight or Freeze
- Adaptive Nature – Survival
- Children freeze or become clingy because they are more vulnerable than adults
- Attachment – impacted by trauma
Children's Brains are rapidly Changing and Growing

- Children are both vulnerable and resilient
- Children process trauma very differently from adults
  - More likely to have nightmares – less likely to have flashbacks
  - More likely to have somatic complaints – such as stomach aches
  - Likely to internalize (accommodate rather than assimilate)
  - More likely to “act out” or play through feelings
  - Less likely to use exclusively verbal processing
  - Dissociation is less concrete – more likely to act distracted or irritable
Foster Care Alumni Studies

- Number one Predictor of Long term positive outcomes was....
A Positive Relationship with One Adult

- Children who experienced trauma and grew up to be successful consistently identified one critical factor...they were able to connect to an adult who they felt cared about them and believed in them.