Complex Trauma in Children: 
Developmental Impact and Current Approaches 
to Treatment 

Presentation by: 
Hilary Hodgdon, Ph.D. 
The Trauma Center

Schedule

- 9-10:30: Morning session I
- 10:30-10:45: Break
- 11-12: Morning session II
- 12-1: Lunch
- 1-2:30: Afternoon session I
- 2:30-2:45: Break
- 2:45-4: Afternoon session II
- 4: Evaluations, CEU’s Handed out
Workshop Goals

- Think trauma: Beyond the DSM
- Complex Trauma: Etiology, Developmental Impact, Expressions
- Overview of Complex Trauma Treatments

What is trauma?
What is trauma?

Per the DSM-IV-TR:
A “traumatic event” must involve:

- Actual or threatened death, serious injury, or threat to physical integrity (objective component).
- Response of intense fear, helplessness or horror (subjective component).

Over time, gradual trend towards expanding the scope of what is considered a traumatic event.

- DSM-V:
  - A1:
    - Experiencing the event.
    - Witnessing the event
    - Learning that the event occurred to a close relative or close friend.
    - Experiencing repeated or extreme exposure to aversive details of the event(s).
  - Also proposed to throw out A1 criteria altogether.
What is trauma?

- **Acute:**
  - Single incident:
    - Car accident
    - Sexual assault
  - **Chronic**
    - Repeated:
      - Physical abuse
      - Exposure to DV

What about acts of omission?

- Physical or emotional neglect.
- Multiple attachment or placement disruptions
- Chaotic early environment
- Impaired care giving

Most Commonly Reported Traumas

Pynoos et al., 2010
Posttraumatic Stress Disorder (PTSD)

- **Re-experiencing**: (1)
  - Recurrent, intrusive distressing recollection (may be repetitive play)
  - Recurrent, distressing dreams
  - Acting or feeling as if event is recurring
  - Psychological distress on exposure to cues
  - Physiological reactivity on exposure to cues
- **Increased arousal** (2)
  - Difficulty falling or staying asleep
  - Irritability or outbursts of anger
  - Difficulty concentrating
  - Hypervigilance
  - Exaggerated startle response
- **Avoidance or Numbing** (3)
  - Efforts to avoid thoughts, feelings, conversations associated with trauma
  - Efforts to avoid activities, places, or people associated with trauma
  - Inability to recall important aspect of trauma
  - Diminished interest or participation in significant activities
  - Feeling of detachment or estrangement from others
  - Sense of foreshortened future

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Does PTSD Capture the Impact of Trauma?

Prevalence of Psychiatric Disorders in Abused Children (Ackerman et al., 1998)

- **Generalized Anxiety Disorder** ...........59%
- **Oppositional Defiant Disorder** ...........36%
- **Simple Phobia** ..................................36%
- **Posttraumatic Stress Disorder** ...........34%
- **ADHD** ...........................................29%
- **Conduct Disorder** .............................21%
- **Dysthymia** .....................................19%
Does PTSD Capture the Impact of Trauma?

- **Prevalence:**
  - 4th (Akerman et al., 1998) or 10th (Copeland et al., 2007) most common diagnosis among trauma-impacted kids.

- **Co-morbidity:**
  - Over 80% of kids and 90% of adults with PTSD have at least one other Axis I diagnosis. (Cloitre et al., 2009)

Thinking beyond the DSM

- **Consideration of:**
  - Trauma types not captured by A1.
  - Cumulative impact of multiple or prolonged trauma exposure.
  - Developmental timing.
  - Context of traumatic experience.
Beyond A1: Emotional Maltreatment

- Definition: “persistent or extreme thwarting of the child’s basic emotional needs” including “parental acts that are harmful because they are insensitive to the child’s developmental level.”
  - Barnett, Marly, & Cicchetti, 1993

- Includes (English & LONGSCAN, 1997):
  - Verbal abuse: insults, threats, belittling.
  - Emotional abuse: bullying, terrorizing
  - Excessive or inappropriate demands on performance.
  - Emotional neglect: shunning, withdrawal of affection or love.
  - Intentional social deprivation or isolation.

- American Academy of Pediatrics:
  - “Most challenging and prevalent form of child abuse and neglect.”

EM: Prevalence

- Impacts over 1.1 million children each year. (Fourth Nat. Incidence Study of Child Abuse and Neglect, 2010)

- Most commonly reported trauma in NCTSN clients. (Spinazzola et al., 2009; Spinazzola et al., In Press)

- Found to be present in over 50% of child welfare cases, but officially noted in only 9% of cases.
  - (Trickett, Mennen, Kim, & Sang, 2009)

- Community samples find rates ranging from 21-80%. (Chamberland et al., 2005; Clement & Chamberland, 2007)
Impact on Mental Health


- PTSD
  - EM predicts PTSD sxhs when other forms of abuse are controlled for. (Taussing & Culhane, 2010)

- Internalizing Behaviors
  - Anxiety
  - Depression
  - Suicidal Ideation and Behaviors
  - Low Self-Esteem

Impact on Mental Health

- Activating effect of EM on PA:
  - 160 maltreated adolescents.
  - Official record that was cross validated.
  - Matched comparison group.
  - Controlled for other forms of abuse.
  - Results:
    - PM accounted for largest amt of unique variance of Internalizing & Externalizing Problems on YSR.
    - PA was only related to Externalizing Problems when PM was added to prediction – suppressor effect.

  (McGee, Wolfe & Wilson, 1997)
Emotional Maltreatment: Results from the NCTSN CORE Data Set

Introduction: Core Data Set (CDS)
- Quality Improvement Initiative
- Network-wide data collection to address:
  - Who is served?
  - What types of problems, symptoms, needs do youth have?
  - What types of trauma have youth experienced?
  - What types of treatment are provided?
  - To what extent and in what ways do youth improve during treatment?
  - Ensure that Network interventions are systematically measured, disseminated, and recognized.
What is in the CDS?

- Data collected on over 14,000 youth from 56 NCTSN sites between 2004 and 2010:
  - Demographic and living situation information
  - Trauma history and detail
  - Indicators of severity
  - Clinical evaluation
  - Treatment
- Standardized Assessment Measures
  - PTSD Symptoms
    - UCLA PTSD Reaction Index
    - Trauma Symptom Checklist for Children-Alternate (also taps associated difficulties: depressive symptoms, anxiety)
  - Behavioral and Emotional Difficulties
    - Child Behavior Checklist
    - CDS measures: administered at treatment entry, end of treatment (if short term) or every 3 months

Baseline Use of Services

<table>
<thead>
<tr>
<th>Educational Sector</th>
<th>MA (N=546)</th>
<th>NCTSN (N=13,542)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special Class/School*</td>
<td>51.7%</td>
<td>16.7%</td>
</tr>
<tr>
<td>School Counselor/Psych/SW*</td>
<td>31.1%</td>
<td>26.2%</td>
</tr>
<tr>
<td>Mental /State Institution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residential TX*</td>
<td>43.8%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Detention Center*</td>
<td>7.9%</td>
<td>2.6%</td>
</tr>
<tr>
<td>Case Management*</td>
<td>56.7%</td>
<td>25.7%</td>
</tr>
<tr>
<td>Outpatient Therapy</td>
<td>31.4%</td>
<td>28.3%</td>
</tr>
<tr>
<td>Psychiatrist*</td>
<td>17.6%</td>
<td>11.9%</td>
</tr>
<tr>
<td>General Medical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Care MD/Pediatric*</td>
<td>23.5%</td>
<td>17.8%</td>
</tr>
<tr>
<td>Child Welfare</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Services*</td>
<td>57.9%</td>
<td>36.1%</td>
</tr>
<tr>
<td>Foster Care*</td>
<td>13.8%</td>
<td>21.4%</td>
</tr>
<tr>
<td>Treatment Foster Care</td>
<td>3.7%</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

*Remaining Centers

*p < .05 for all comparisons  
CDS September 2010
Study of Emotional Maltreatment

- Subset of 5,616 youth (2,379 males, 3,237 females).
- Looked at kids who experienced:
  - Only:
    - Physical abuse
    - Sexual abuse
    - Emotional abuse
  - Any combination of the above:
    - Physical and sexual abuse
    - Physical and emotional abuse
    - All three types.
    - Etc.

- Compared impact of trauma types for:
  - Internalizing and externalizing symptoms
  - PTSD Symptoms
  - Functional impairment
  - Clinically significant difficulties in a range of areas.

EM Impact: CBCL Total

Spinazzola et al., Under Review
EM Impact: Clinician Rated Symptoms

Spinazzola et al., Under Review

Cumulative Impact of Trauma: The Adverse Childhood Experiences (ACEs) Study
Vincent Felitti
Robert Anda
Adverse Childhood Experiences Study (ACES)*

Felitti et al. 1998;

Percentage of Children Experiencing Cumulative Traumas
Adverse Childhood Experiences and Outcome

- Increased presence of childhood adverse experience leads to increased risk of:
  - Depression
  - Drug addiction
  - Alcohol use/abuse
  - Adult sexual assault
  - Adult domestic violence (perpetrator and victim)
  - Early onset sexuality and sexual promiscuity
  - Teen pregnancy and paternity
  - Suicidality
  - Obesity
  - Cigarette use
  - General health problems

ACE Study (Felitti et al., 1998)
ACE Score and Health Risks


Considered self an alcoholic
Ever used illicit drugs
Ever injected drugs
Ever had 50 or more intercourse partners
Ever had a sexually transmitted disease

Prevalence (%)
Estimates of the Population Attributable Risk* (PAR) of Adverse Childhood Experiences for Selected Outcomes in Women

<table>
<thead>
<tr>
<th>Category</th>
<th>PAR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental Health:</td>
<td>PAR</td>
</tr>
<tr>
<td>Current depression</td>
<td>54%</td>
</tr>
<tr>
<td>Depressed affect</td>
<td>41%</td>
</tr>
<tr>
<td>Suicide attempt</td>
<td>58%</td>
</tr>
<tr>
<td>Drug Abuse:</td>
<td></td>
</tr>
<tr>
<td>Alcoholism</td>
<td>65%</td>
</tr>
<tr>
<td>Drug abuse</td>
<td>50%</td>
</tr>
<tr>
<td>IV drug abuse</td>
<td>78%</td>
</tr>
<tr>
<td>Promiscuity</td>
<td>48%</td>
</tr>
<tr>
<td>Crime Victim:</td>
<td></td>
</tr>
<tr>
<td>Sexual assault</td>
<td>62%</td>
</tr>
<tr>
<td>Domestic violence</td>
<td>52%</td>
</tr>
</tbody>
</table>

Developmental Considerations
The Developmental Unfolding of Trauma Impact

“A ‘developmental analysis’ presupposes change and novelty, highlights the critical role of timing the organization of behavior, underscores multiple determinants, and cautions against expecting invariant relations between causes and outcomes.”

- Cicchetti & Toth, 2008
Developmental Stages

<table>
<thead>
<tr>
<th>Life Stage</th>
<th>Approximate Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infancy</td>
<td>Birth – 2 years</td>
</tr>
<tr>
<td>Toddler</td>
<td>2 – 3 years</td>
</tr>
<tr>
<td>Early Childhood</td>
<td>3 – 6 years</td>
</tr>
<tr>
<td>Middle Childhood/Latency</td>
<td>6 – 13 years</td>
</tr>
<tr>
<td>Adolescence</td>
<td>13 – 18 years</td>
</tr>
</tbody>
</table>

Developmental Timing

U.S. DHHS, ACF, 2012
Developmental Timing

- Importance of timing - 2 Levels:
  - What is impacted ("Developmental Task}).
  - How impact is expressed (disruption, symptoms).

<table>
<thead>
<tr>
<th>0-5 Key Developmental Tasks</th>
<th>Trauma’s Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of visual and auditory</td>
<td>Attachment to primary caregiver</td>
</tr>
<tr>
<td>perception</td>
<td></td>
</tr>
<tr>
<td>Recognition of and response to</td>
<td>Avoidance of contact</td>
</tr>
<tr>
<td>emotional cues</td>
<td></td>
</tr>
<tr>
<td>Attachment to primary caregiver</td>
<td>Heightened startle response</td>
</tr>
<tr>
<td></td>
<td>Confusion about what’s dangerous and who to go to</td>
</tr>
<tr>
<td></td>
<td>for protection</td>
</tr>
<tr>
<td></td>
<td>Fear of being separated from familiar people/places</td>
</tr>
</tbody>
</table>
### School-Aged Children (6-12)

<table>
<thead>
<tr>
<th>Key Developmental Tasks</th>
<th>Trauma’s Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage fears, anxieties, and aggression</td>
<td>Emotional Dysregulation</td>
</tr>
<tr>
<td>Sustain attention for learning and problem solving</td>
<td>Learning Problems</td>
</tr>
<tr>
<td>Control impulses and manage physical responses to danger</td>
<td>Specific anxieties and fears</td>
</tr>
<tr>
<td></td>
<td>Attention seeking</td>
</tr>
<tr>
<td></td>
<td>Reversion to younger behaviors</td>
</tr>
</tbody>
</table>

### Adolescence (13-21)

<table>
<thead>
<tr>
<th>Key Developmental Tasks</th>
<th>Trauma’s Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Think abstractly</td>
<td>Difficulty imagining or planning for the future</td>
</tr>
<tr>
<td>Anticipate and consider the consequences of behavior</td>
<td>Over- or underestimating danger</td>
</tr>
<tr>
<td>Accurately judge danger and safety</td>
<td>Inappropriate aggression</td>
</tr>
<tr>
<td>Modify and control behavior to meet long-term goals</td>
<td>Reckless and/or self-destructive behaviors</td>
</tr>
</tbody>
</table>
Context

- **Environment**
  - Intra-familial trauma most common.
    - Accounts for over 80% of child welfare reports.
    - Linked to – disruptions in self-regulation, empathy development, ability to trust, etc.
- **Perpetrator**
  - Trickett et al. (2001) profiles study: sexual abuse by father / close family member = worse outcomes in adolescence than when perpetrator was outside the family.
- **Reaction to disclosure**
  - Having an adult who believes you and takes action = one of the strongest predictors of positive outcomes.

Trauma and Children

- Most commonly reported (and also impactful) types of traumatic exposure (i.e. emotional abuse) in kids not covered by A1 criteria.
- PTSD not most common diagnosis in trauma-impacted kids.
- Majority of trauma-impacted kids exhibit a range of co-morbid symptoms – results in kids being labeled with multiple diagnoses.
- Consideration of cumulative impact, developmental stage and context is essential.
Complex Trauma

DSM-IV Field Trial for PTSD
van der Kolk, Pelcovitz, Roth & Mandel, 1994

AGE AT ONSET OF TRAUMA (years)

PERCENT ENDORSEMENT

0-4 5-8 9-13 14-19 20-25 >26
N=75 N=92 N=56 N=62 N=16 N=27

Complex PTSD or DESNOS

PTSD only

Hilary Hodgdon, Ph.D. – Complex Trauma in Children
Complex Trauma: Exposure

- **Complex Trauma Taskforce** found:
  - Multiple and/or chronic exposure – the rule rather than the exception:
    - Ave number of exposure types: 3
    - 94% of clinicians reported ave # of exposure types to be more than one.
    - Represents over 77% of child clients in NCTSN sample.
  - Early exposure common:
    - Average age of onset: 5 years
  - Context of exposure most frequently within family system.

  (Spinazzola et al., 2005)

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Prevalence of Multiple Traumas
Complex Trauma: Expressions

- Less than 25% of kids in CTT survey met PTSD criteria.
- Most commonly reported problems were:

![Bar chart showing the percentage of kids experiencing different challenges.](chart)

### Complex Trauma

**Domains of Impairment in Children Exposed to Complex Trauma**

<table>
<thead>
<tr>
<th>C. Emotional</th>
<th>B. Behavioral</th>
<th>E. Cognitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problems with boundaries</td>
<td>Disturbances in states of consciousness</td>
<td>Difficulties in attention regulation and executive functioning</td>
</tr>
<tr>
<td>Social isolation</td>
<td>Amnesia</td>
<td>Lack of sustained curiosity</td>
</tr>
<tr>
<td>Interpersonal difficulties</td>
<td>Depersonalization and dehumanization</td>
<td>Problems with processing novel information</td>
</tr>
<tr>
<td>Difficulty attaching to other people’s emotional states</td>
<td>Two or more distinct states of consciousness</td>
<td>Problems focusing on and completing tasks</td>
</tr>
<tr>
<td>Difficulty with perspective-taking</td>
<td>Impaired memory for state-based events</td>
<td>Problems with object constancy</td>
</tr>
</tbody>
</table>

- **Affect Dysregulation**
  - Difficulty with emotional self-regulation
  - Difficulty labelling and expressing feelings
  - Problems knowing and describing internal states
  - Difficulty communicating wishes and needs

- **Attention/Concentration**
  - Attention and focus problems
  - Difficulty with concentration
  - Difficulty with tasks requiring sustained attention

- **Negative Self-image**
  - Self-esteem issues
  - Low self-worth

- **Imulse Control**
  - Difficulty with impulse control
  - Difficulty with self-regulation

- **Aggression/Relational**
  - Aggressive behavior
  - Difficulty with interpersonal relationships

_Cook et al., 2005_
Developmental Trauma Disorder (DTD)

Statement of Purpose

The goal of introducing the diagnosis of Developmental Trauma Disorder is to capture the reality of the clinical presentations of children and adolescents exposed to chronic interpersonal trauma and thereby guide clinicians to develop and utilize effective interventions and for researchers to study the neurobiology and transmission of chronic interpersonal violence.

Whether or not they exhibit symptoms of PTSD, children who have developed in the context of ongoing danger, maltreatment, and inadequate caregiving systems are ill-served by the current diagnostic system, as it frequently leads to no diagnosis, multiple unrelated diagnoses, an emphasis on behavioral control without recognition of interpersonal trauma and lack of safety in the etiology of symptoms, and a lack of attention to ameliorating the developmental disruptions that underlie the symptoms.

- van der Kolk et al.

DTD

A. Exposure:
   A1. Multiple / prolonged trauma in childhood or early adolescence.
   A2. Disruptions in caretaking.

B. Affective and Physiological Dysregulation.
C. Attentional and Behavioral Dysregulation.
D. Self and Relational Dysregulation.
E. Posttraumatic Spectrum Symptoms.
F. 6 month duration
G. Functional Impairment.
CONSENSUS PROPOSED CRITERIA FOR DEVELOPMENTAL TRAUMA DISORDER

A. Exposure. The child or adolescent has experienced or witnessed multiple or prolonged adverse events over a period of at least one year beginning in childhood or early adolescence, including:

A. 1. Direct experience or witnessing of repeated and severe episodes of interpersonal violence; and

A. 2. Significant disruptions of protective caregiving as the result of repeated changes in primary caregiver; repeated separation from the primary caregiver; or exposure to severe and persistent emotional abuse

B. Affective and Physiological Dysregulation. The child exhibits impaired normative developmental competencies related to arousal regulation, including at least two of the following:

B. 1. Inability to modulate, tolerate, or recover from extreme affect states (e.g., fear, anger, shame), including prolonged and extreme tantrums, or immobilization

B. 2. Disturbances in regulation in bodily functions (e.g. persistent disturbances in sleeping, eating, and elimination; over-reactivity or under-reactivity to touch and sounds; disorganization during routine transitions)

B. 3. Diminished awareness/dissociation of sensations, emotions and bodily states

B. 4. Impaired capacity to describe emotions or bodily states
C. Attentional and Behavioral Dysregulation: The child exhibits impaired normative developmental competencies related to sustained attention, learning, or coping with stress, including at least three of the following:

C. 1. Preoccupation with threat, or impaired capacity to perceive threat, including misreading of safety and danger cues
C. 2. Impaired capacity for self-protection, including extreme risk-taking or thrill-seeking
C. 3. Maladaptive attempts at self-soothing (e.g., rocking and other rhythmical movements, compulsive masturbation)
C. 4. Habitual (intentional or automatic) or reactive self-harm
C. 5. Inability to initiate or sustain goal-directed behavior

D. Self and Relational Dysregulation. The child exhibits impaired normative developmental competencies in their sense of personal identity and involvement in relationships, including at least three of the following:

D. 1. Intense preoccupation with safety of the caregiver or other loved ones (including precocious caregiving) or difficulty tolerating reunion with them after separation
D. 2. Persistent negative sense of self, including self-loathing, helplessness, worthlessness, ineffectiveness, or defectiveness
D. 3. Extreme and persistent distrust, defiance or lack of reciprocal behavior in close relationships with adults or peers
D. 4. Reactive physical or verbal aggression toward peers, caregivers, or other adults
D. 5. Inappropriate (excessive or promiscuous) attempts to get intimate contact (including but not limited to sexual or physical intimacy) or excessive reliance on peers or adults for safety and reassurance
D. 6. Impaired capacity to regulate empathic arousal as evidenced by lack of empathy for, or intolerance of, expressions of distress of others, or excessive responsiveness to the distress of others
Attachment

Attachment - Human Studies

FIGURE 1. Brain-brain interactions during face-to-face communications of proto-conversation, mediated by eye-to-eye orientations, vocalizations, hand gestures, and movements of the arms and head, all acting in coordination to express interpersonal awareness and emotions. Adapted from Aiken & Trevathan (1993) and used with permission of Cambridge University Press.
Attachment

- “A reciprocal, enduring emotional tie between an infant and caregiver, each of whom contributes to the quality of the relationship.” (Papalia, Olds, & Feldman, 2002)
- Dyadic: there is a back and forth.
- Parent/caregiver is the “secure base” from which the child explores the world around them.

Attachment

- Harlow (1971) showed that infants bond with surrogate mothers because of bodily contact and not nourishment.
  - They become attached to parents who are soft and warm and who rock, feed, and pat.
  - Much of the parent-infant emotional connection occurs because of touch.
- Familiarity is another factor in causing attachment.
  - Children like to reread the same books, rewatch the same movies, reenact family traditions.
Attachment

Harlow’s Monkey: Contact Comfort

Placed in a strange situation, 60% of children express secure attachment.
- In their mother’s presence, they play comfortably, happily exploring their new environment.
- When she leaves, they are distressed.
- When she returns, they seek contact with her.

Relaxed and attentive caregiving becomes the backbone of secure attachment.
- Sensitive, responsive mothers, who noticed what their babies were doing and responded appropriately, had infants who exhibited secure attachment.

Myers, 2007
Insecure Attachment

- The other 30% show insecure attachment.
  - These children cling to their mothers or caregivers, and are less likely to explore the environment.
  - When she leaves, they either cry loudly and remain upset or seem indifferent to their mother’s going and returning.

- Being insensitive or unresponsive to child needs is predictive of insecure attachment.
- Indicates that level of attunement between caregiver and child is important.

Disorganized Attachment

- 80% of maltreated samples display disorganized attachment:
  - Combination of approach and avoidance behaviors.
  - May appear frightened or dazed.
  - Do not have organized response to environment.
Self Regulation

- Physiological
- Emotional
- Cognitive

Physiological Dysregulation

- Somatic expressions
- Sleep disturbance
- Bed wetting
- Dysregulated energy states
**The Modulation Model© for Children**

Sympathetic Arousal: high activation

![Hyperarousal:](image)

Parasympathetic Arousal: low activation

![Hypoarousal:](image)

**Optimal Arousal Zone: Balanced autonomic nervous system**

“inside our window of tolerance” (D. Siegel 1999)

**Physiological Dysregulation**

- **Hyperarousal:**
  - High energy
  - Lack of control over body / attention / concentration.
  - Can look like: ADHD, ODD

- **Hypoarousal:**
  - Chronic low energy
  - Low motivation.
  - Can look like: Depression

With Permission of the Sensorimotor Psychotherapy Institute, Ogden and Minton (2000)
Self Regulation

- Trauma impacted kids display deficits in:
  - Emotion identification and processing (self and others).
  - Emotion regulation: ability to modulate emotions in response to environmental demands.
  - Emotional expression: ability to verbalize what they are feeling and what they need.
Emotion Identification

Scared
Sad
Happy
Surprised
Angry

Hostile Attribution Bias

Hostile activation of arousal to deal with perceived threat

Failure to perceive fine line in aggressive response

Past experience of aggression or victimisation may cause activation of hostile attribution bias

Attribute fault - hurt to self

Data base
- recognition of roles
- social awareness
- social knowledge

Peer evaluation and response

Inappropriate aggressive or submissive response

Conflict expression of another

Outcome failure to detect fine
Cognitive Dysregulation

Disruption in the usually integrated functions of consciousness, memory, identity or perception.

(DSM-IV-TR)
Dissociation: 3 Components

1. Absorption:
   - Losing contact with current surroundings – this could be due to absorption in an activity, flashback, going away in one’s mind, etc.

2. Derealization/Depersonalization:
   - “Out of body” experiences, feeling disconnected from one’s body.
   - Sensory disturbances.
   - Feeling as though things “aren’t real.”
   - Feeling like a robot, just going through the motions, or like in a movie.

3. Amnesia for dissociative states:
   - Person engages in a behavior and then has no memory of it.
   - “Coming to” in the middle of an activity, with no memory of how one got there.

(Waller, Putnam, & Carlson, 1996)

Dissociative Continuum
What does Dissociation Look Like?

- Trace like state, “Out of it”, or going away in their mind.
- Unresponsive/catatonic or internal focus.
- Perception becomes fuzzy, out of focus, or confused.
- Physical, panic symptoms this may precede or continue throughout a dissociative episode or flashback.
- Noticeable change in behavior or functioning that is out of character or mismatch with their developmental stage – “state shift.”
- Conversion symptoms - pseudo-seizers, fainting, or other physical ailments.
- Amnesia/difficulty remembering the details of an event.
- Reenactment of past trauma.
- Retreat into fantasy world and imagination.

Neurobiological Expressions
Impact of Trauma on the Brain

At Birth, the brain contains twice as many nerve cells as there will be at age 6.

Which cells survive and thrive and which ones do not is determined by a combination of effects involving genes and experiences.

By age 6, the cells which have survived will form thousands of connections with other cells.

Brain development happens from the bottom up:

- From primitive (basic survival)
- To more complex (rational thought, planning, abstract thinking)

(Continued)
The brain develops by forming connections.

Interactions with caregivers are critical to brain development.

The more an experience is repeated, the stronger the connections become.

**Triune Brain**

- **Neocortex** (or neocorron): Intellect, executive functioning, language, conscious thought, self awareness. “Wise Mind”
- **Limbic system** (or old brain): Sensory and emotional experience, implicit memory, “Emotion Mind”
- **Reptilian** (or old limbic): Instinctive responses, unconscious body functions (breathing, digestion, muscle tone, etc.)
Important Brain functions such as frustration tolerance, ability to pay attention and learn, sleeping, eating, social relations, and arousal of the nervous system are regulated by connections and influence.

- Trauma has biological consequences on the regulation of brain functions.
- These biological effects damage the child’s or adult’s ability to control himself/herself, calmly interact with others, pay attention and learn and take care of his/her life.

Source: Rowe J. Creating Trauma-Informed CW systems, Chapter 3 p: 33
With repeated stress, the Alarm System “Express Route” becomes the main road.
Trauma Derails Development

Exposure to trauma causes the brain to develop in a way that will help the child survive in a dangerous world:

- On constant alert for danger
- Quick to react to threats (fight, flight, freeze, submissive)

The stress hormones produced during trauma also interfere with the development of higher brain functions.


Emotion Regulation Circuit

- Anterior Cingulate
- Amygdala (Alarm): Alerts to danger
- Hippocampus: Memory Processing
Trauma and the Brain

- Trauma can have serious consequences for the normal development of children’s brains, brain chemistry, and nervous system.
- Trauma-induced alterations in biological stress systems can adversely affect brain development, cognitive and academic skills, and language acquisition.
- Traumatized children and adolescents display changes in the levels of stress hormones similar to those seen in combat veterans.
  - These changes may affect the way traumatized children and adolescents respond to future stress in their lives, and may also influence their long-term health.¹

¹ Pynoos et al. (1997), Ann N Y Acad Sci;821:176-193

In early childhood, trauma can be associated with reduced size of the cortex.

- The cortex is responsible for many complex functions, including memory, attention, perceptual awareness, thinking, language, and consciousness.
- Trauma may affect “cross-talk” between the brain’s hemispheres, including parts of the brain governing emotions.
  - These changes may affect IQ, the ability to regulate emotions, and can lead to increased fearfulness and a reduced sense of safety and protection.
In school-age children, trauma undermines the development of brain regions that would normally help children:

- Manage fears, anxieties, and aggression
- Sustain attention for learning and problem solving
- Control impulses and manage physical responses to danger, enabling the adolescent to consider and take protective actions

As a result, children may exhibit:

- Sleep disturbances
- New difficulties with learning
- Difficulties in controlling startle reactions
- Behavior that shifts between overly fearful and overly aggressive

Trauma and the Brain

NCTSN, 2008
Trauma and the Brain

- In adolescents, trauma can interfere with development of the prefrontal cortex, the region responsible for:
  - Consideration of the consequences of behavior
  - Realistic appraisal of danger and safety
  - Ability to govern behavior and meet longer-term goals

- As a result, adolescents who have experienced trauma are at increased risk for:
  - Reckless and risk-taking behavior
  - Underachievement and school failure
  - Poor choices
  - Aggressive or delinquent activity


“I wasn’t thinking!”

- Peers
- Triggers
- Emotionally charged situation
- Impulsivity
- Bad Decisions
- Flight, Fight, Freeze

Hilary Hodgdon, Ph.D. – Complex Trauma in Children
Brain Plasticity

Sowell et al, 2003 online

Identity
Fragmentation: “Parts” of Self

- What are our own parts?
  - Professional part
  - Family part
  - Social part
  - Special talents, roles or identities?
- For our kids, parts of self can be more:
  - Fragmented.
  - Regressed, childish or immature.
  - Hostile, angry, or aggressive.

Maintaining Empathy

Questions to ask yourself:
- Is this a “part”?
- How old is the part?
- What does this part need in the moment?
- How can I help this part get it’s needs met in a safe way?
- Am I getting triggered by this part?
- What can I do in the moment to take care of myself?