The Impact of Psychological Trauma on Development and Learning

Implications for education, social service systems, and treatment
Definition of a traumatic event

- A traumatic event is any event or events, which overwhelms our core capacity to cope.

- It results in an experience of personal threat to our safety and/or the integrity of our identity.
Complex Trauma

- Multiple and/or chronic exposure to developmentally adverse interpersonal victimization

- Physical, sexual and emotional abuse and neglect

- Domestic and community violence
What Is Child Traumatic Stress?

- Child traumatic stress refers to the physical and emotional responses of a child to events that threaten the life or physical integrity of the child or of someone critically important to the child (such as a parent or sibling).

- Traumatic events overwhelm a child’s capacity to cope and elicit feelings of terror, powerlessness, and out-of-control physiological arousal.
Types of Traumatic Stress

- Acute trauma is a single traumatic event that is limited in time. Examples include:
  - Serious accidents
  - Community violence
  - Natural disasters (earthquakes, wildfires, floods)
  - Sudden or violent loss of a loved one
  - Physical or sexual assault (e.g., being shot or raped)

- During an acute event, children go through a variety of feelings, thoughts, and physical reactions that are frightening in and of themselves and contribute to a sense of being overwhelmed.
Types of Traumatic Stress

- Chronic trauma refers to the experience of multiple traumatic events.
- These may be multiple and varied events—such as a child who is exposed to domestic violence, is involved in a serious car accident, and then becomes a victim of community violence—or longstanding trauma such as physical abuse, neglect, or war.
- The effects of chronic trauma are often cumulative, as each event serves to remind the child of prior trauma and reinforce its negative impact.
Statistics on Impact of Trauma

• 61% of men and 50% of women in the U.S. will experience at least one traumatic event in a lifetime.

• 5% of men and 10% of women in the general population have PTSD (Kessler, et. Al., 1995)

• 30-70% of persons in outpatient treatment and 40-72% of those in inpatient treatment report histories of trauma (Newman et. al., 1998)

• 75% of persons in substance abuse were victims of physical or sexual violence (SAMHSA, 2000)
U.S. Prevalence

- One in four children/adolescents experience at least one potentially traumatic event before the age of 16.¹

- In a 1995 study, 41% of middle school students in urban school systems reported witnessing a stabbing or shooting in the previous year.²

- Four out of 10 U.S. children report witnessing violence; 8% report a lifetime prevalence of sexual assault, and 17% report having been physically assaulted.³

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Vermont Children Affected by Trauma

- **DCF 2011:**
  - 15,500 calls
  - 4,908 investigations
  - 1,037 children in custody *(DCF 2011 Annual Report)*

- **DCF intakes w/ domestic violence identified**
  - **1,892** *(Domestic Violence Fatality Review Commission Report, 2009)*

- **Children served by Network Programs**
  - **1,212** *(VT Network Against Domestic and Sexual Violence, 2011)*

- **Emergency Room Injury Child Victims**
  - **15,012** (10% referred to CMH)

- **Percentage in DCF custody served by CMH**
  - **24%** *(February 6, 2004).* Vermont Mental Health Performance Indicator Project. Young Trauma Victims served in Mental Health Programs.
## Children with Disabilities

<table>
<thead>
<tr>
<th>Incidence per 1,000</th>
<th>Children w/out Disabilities</th>
<th>Children w/ Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Abuse</td>
<td>4.5</td>
<td>9.5</td>
</tr>
<tr>
<td>Sexual Abuse</td>
<td>2.0</td>
<td>3.5</td>
</tr>
<tr>
<td>Emotional Abuse</td>
<td>2.9 (Goldson, 2002)</td>
<td>3.5</td>
</tr>
</tbody>
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Neglect, physical abuse, and emotional abuse are most often perpetrated by immediate family members. Sexual abuse is largely perpetrated by extrafamilial members (Sullivan and Knutson, 2000).
Domestic and Sexual Violence in Vermont

VT Network Against Domestic and Sexual Violence:

• Served 1,025 victims of sexual assault
• 7317 individuals who experienced domestic violence
• Responded to 10,250 hotline crisis calls in FY 2011.
Domestic Violence and VT Crime

- 51% of all VT homicides involved domestic violence from 1994-2010
- 95% of all violent crime in VT involved intimate partners (VT Div of Crim Justice, 2007)
- VT ranked sixth in the nation for per capita murder of women by men in single incidents w/ single victims
Prevalence of Child Abuse

Child Abuse World-Wide

■ 73 million boys
■ 150 million girls

Are Sexually abused annually

■ 53,000 children are murdered each year

World Health Organization
7 Domains of Impairment in Children Exposed to Complex Trauma

1. ATTACHMENT:

- Uncertainty about the reliability and predictability of the world
- Problems with boundaries
- Distrust and suspiciousness
- Social isolation
- Interpersonal difficulties
- Difficulty attuning to other people’s emotional states
- Difficulty with perspective taking
- Difficulty enlisting other people as allies
2. BIOLOGY:

- Sensorimotor developmental problems
- Hypersensitivity to physical contact
- Analgesia
- Problems with coordination, balance, body tone
- Difficulties localizing skin contact
- Somatization
- Increased medical problems across a wide span, e.g., pelvic pain, asthma, skin problems, autoimmune disorders, pseudo seizures
7 Domains of Impairment in Children Exposed to Complex Trauma

3. AFFECT REGULATION:
- Difficulty with emotional self-regulation
- Difficulty describing feelings and internal experience
- Problems knowing and describing internal states
- Difficulty communicating wishes and desires

4. DISSOCIATION:
- Distinct alterations in states of consciousness
- Amnesia
- Depersonalization and derealization
- Two or more distinct states of consciousness, with impaired memory for state-based events
5. BEHAVIORAL CONTROL:
- Poor modulation of impulses
- Self-destructive behavior
- Aggression against others
- Pathological self-soothing behaviors
- Sleep disturbances
- Eating disorders
- Substance abuse
- Excessive compliance
- Oppositional behavior
- Difficulty understanding and complying with rules
- Communication of traumatic past by reenactment in day-to-day behavior or play (sexual, aggressive, etc.)
6. COGNITION:

- Difficulties in attention, regulation and executive functioning
- Lack of sustained curiosity
- Problems with processing novel information
- Problems focusing on and completing tasks
- Problems with object constancy
- Difficulty planning and anticipating
- Problems understanding own contribution to what happens to them
- Learning difficulties
- Problems with language development
- Problems with orientation in time and space
- Acoustic and visual perceptual problems
- Impaired comprehension of complex visual-spatial patterns
7 Domains of Impairment in Children Exposed to Complex Trauma

7. SELF-CONCEPT:

- Lack of a continuous, predictable sense of self
- Poor sense of separateness
- Disturbances of body image
- Low self-esteem
- Shame and guilt
Impact of Childhood Trauma

- Trauma effects every domain of functioning:
  - Developmental milestones
  - Attachment
  - Intellectual capacity
  - Cognitive ability
  - Affect regulation
  - Interpersonal functioning
  - Mental health
  - Immune/Autoimmune system
Impact of Child Abuse

Childhood trauma is associated with increased rates of:

- Imprisonment
- Substance Abuse
- HIV Status
- Unemployment Status
- Use of Psychiatric Services
- Impaired Health Status

Impact of Child Abuse

Children who have experienced a traumatic event show an increased incidence of:

- Ischemic heart disease
- Cancer
- Chronic Lung disease
- Skeletal fractures
- Liver disease
Impact of Child Abuse

- Temporal Lobe Epilepsy
- Developmental Disabilities; 10-25%
- 3-6% of abused children will have a permanent disability as a result of the abuse
- Between 20-50% of abused children suffer mild to severe brain damage.

(Office of Trauma Services, Department of Mental Health, Mental Retardation and Substance Abuse Services, Augusta, Maine)
Impact of Child Abuse

- Early abuse and neglect negatively affect the maturation of the developing brain.
- 80% of traumatized children have disorganized attachment patterns.
- During adolescence traumatized children have a 300% greater chance to engage in substance abuse, self-mutilation and aggressive behavior.
A Biodevelopmental Framework

- Early experiences leave a chemical “signature” on our genes that determines whether and how the genes are turned on or off.
- This is known as “epigenetic adaptation,”
- It shapes how our brains and bodies develop.
- This is a biological mechanism
  - The environment of relationships, physical, chemical, built environments, and early nutrition cause the physiological adaptations and disruptions that can influence a lifetime of well-being.
How Early Experiences Get into the Body: A Biodevelopmental Framework

Foundations of Healthy Development and Sources of Early Adversity

Environment of Relationships
Physical, Chemical, and Built Environments
Nutrition

Gene-Environment Interaction

Cumulative Effects Over Time

Physiological Adaptations and Disruptions

Lifelong Outcomes

Health-Related Behaviors
Educational Achievement and Economic Productivity
Physical and Mental Health

Biological Embedding During Sensitive Periods
Traumatic Reaction

Exposure to Trauma

Reaction

Avoidance/Numbing  Re-Experiencing  Hyperarousal
Brain Lobes

Frontal Lobe

Parietal Lobe

Temporal Lobe

Occipital Lobe

Cerebrum

Cerebellum

Brain Stem

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Limbic System

Limbic System
- Thalamus
- Hypothalamus
- Pituitary
- Amygdala
- Hippocampus

BRAIN STEM
- Pons
- Reticular formation
- Medulla

Cerebral cortex
- Corpus callosum
- Cerebellum
- Spinal cord
Effects of Trauma on Brain Function

Pre-frontal Cortex
(Integration and Planning)

Hippocampus
(cognitive map)

Thalamus

Amygdala
(significance)

- visual
- auditory
- olfactory
- kinesthetic
- gustatory
Impact of Neglect on a Developing Brain

3 Year Old Children

NORMAL

EXTREME NEGLECT

Long-Term Effects of Trauma

Generalized hyperarousal
• Problems with social attachment – excessive dependence or isolation
• Aggression against self and others
• Inability to modulate sexual impulses

Alterations in Neurobiological processes in stimulus discrimination
• Problems with attention and concentration
• Dissociation
• Somatization
Effects of Trauma

Conditioned fear responses to trauma-related stimuli

Shattered meaning propositions

■ Loss of trust, hope, and sense of agency
■ Loss of “thoughts as experimental action”

Social avoidance

■ Loss of meaningful attachments
■ Lack of participation in preparing for the future
Developmental Stage: Birth-2

- **Normative:**
  - Tasks: Identity, Connection, Exploration, Agency
  - Communication through physical activity
  - Strong increase in anxiety when immediate needs not met
  - Need physical human contact for reassurance
  - Growth of sensory perception/response

- **Trauma impact:**
  - Altered connections; sacrifice of exploration; deficits in agency
  - Deficits in development of non-verbal/ dyadic communication strategies
  - Exposure to significant arousal in absence of strategies for soothing
  - Multiple potential “triggers”/danger cues solidified on NON-VERBAL level
Developmental Stage: 2-6

- **Normative:**
  - Increased focus on development of agency, independence
  - Need for structure and security
  - Cognitively aware of need for nurturing
  - Minimal concept of time/space
  - Speech available; but feelings still communicated more through play and behavior, needs through words

- **Trauma Impact:**
  - Continued sacrifice of independence (or—age-inappropriate independence)
  - Development of rigid control strategies to manage anxiety
  - Reliance on primitive coping/self-soothing
  - Building of defenses against affect and/or connection
  - Continued deficits in self-expression
Developmental Stage: Elementary

**Normative:**
- Increase in independence and industry
- Increased ties to and investment in school, community, peers
- Concrete information more important than abstract in meaning-making
- Early understanding of time/space, but still focused on the present

**Trauma Impact:**
- Reduced development of competencies across domains
- School deficits/impairments
- Building and internalization of negative self-concept/self-blame
- Failure to develop adequate peer relationships; vulnerability to harm by others
- Early onset depression/hopelessness/helplessness
Developmental Stage: Adolescence

- **Normative:**
  - Striving for independence; separation/individuation
  - Peer group important source of support, information, and reference
  - Self-conscious; belief in self as focus of attention
  - Body image, sexual image, self-image all important
  - Black-and-white view; extremes, judgments
  - Able to see future but less able to see consequences

- **Trauma Impact:**
  - Premature separation or age-inappropriate dependence
  - Risk for negative peer influence and affiliation
  - Significant risk for high-risk behaviors
  - Over-control/perfectionism
  - Ongoing reliance on primitive coping strategies, with failure to develop age-appropriate strategies
  - Crystallization of negative self-identity
Developmental Stage: Adulthood

**Normative:**
- Solidification of identity, formation of adult relationships, transition into multiple roles, evaluation of life industry
- Able to function independently, with others as occasional source of instrumental or emotional support
- Capacity to take perspective
- Capacity to use abstract thought
- Able to link past, present, and future

**Trauma Impact:**
- Altered self-identity (self-blame, guilt, shame, damage, powerlessness, etc.)
- Impaired capacity to form mature relationships (over-dependence or under dependence)
- Difficulty regulating emotional and physiological states, and increasingly rigid reliance on primitive strategies
- Breakdown of cognitive processes in face of danger/overwhelming stress
- Splintered identity and functioning
Trauma Informed System

Trauma-informed services are not designed to treat symptoms or syndromes related to abuse or trauma. Instead, the primary purpose is to deliver mental health, addictions, housing supports, vocational or employment counseling services, etc., in a manner that acknowledges the role that violence and victimization play in the lives of most consumers of mental health and substance abuse services.
This understanding is used to design service systems that accommodate the vulnerabilities of trauma survivors and allow services to be delivered in a way that will facilitate consumer participation that is appropriate and helpful to the special needs of trauma survivors.

5 Principles of a Trauma-Informed System

1. **Safety**: Ensuring Physical & Emotional Safety
2. **Trustworthiness**: Maximizing trustworthiness through Task, Clarity, Consistency, & Interpersonal Boundaries
3. **Choice**: Maximizing Consumer Choice & Control
4. **Collaboration**: Maximizing Collaboration and Sharing Power
5. **Empowerment**: Prioritizing empowerment and skill building

Fallot & Harris (2006)
What Works

RICH

- Respect
- Information
- Connection
- Hope

Empowering and Collaborative Relationships

Risking Connection, Karen Saakvitne
What Works

- Power
- Choice
- Control

C.L.E.A.R.E.D.

Create something (food, art, photography….)

Love your family, spouse, and pets and spend lots of time with them

Exercise at least 3 times per week

Avoid excess in anything (food, caffeine, alcohol, exercise, work….)

Relax with a good book, and schedule “nothing” time

Eat healthy food

Dream about your goals and envision the future you want for yourself and your family