Overview
When youth are exposed to violence, trauma and loss, they are faced with negotiating extradevalopmental tasks, which divert energy from other life tasks—frequently leading to “developmental de-railment.” Chronic, severe and/or early exposure may even alter neurophysiology. This brief discussion will explore types of exposure to trauma, ways in which young people are exposed to trauma, and will look at the developmental and neurodevelopmental effects of exposure to trauma and loss. We will also discuss the extent to which exposure to violence leads to behaviors that are identified as “problematic” in the classroom.

Goals for the Discussion
Upon conclusion of the discussion, participants will be able to:
1. Define trauma.
2. State and define four ways in which youth are exposed to violence and trauma.
3. Discuss types of trauma and ways in which the effects of trauma may manifest.
4. Discuss the impact of trauma on development.
5. Discuss the neurophysiological effects of trauma.

Developed and Presented by:
Jeff Levy, CTRS, LCSW
Co-Founder and CEO, Live Oak, Inc.
Developing a Common Language

Trauma
- Event, action, condition
- Damages, disrupts, distorts, destroys or changes in some fundamental way
- Cognition, Affect, Somatic/Sensation
- Self, Relationships, World

Exposure to Trauma/Violence
- What we learn/read/see through media
- Co-victimization
- Victimization
- Perpetration

Types of Trauma
- Type I
  - single event
  - Big T
- Type II
  - multiple event
  - little t
- Other
  - Complex PTSD
  - DESNOS
  - DTD
  - Microtrauma, Microaggression, and Insidious Trauma
Post Traumatic Stress  
Versus/And/Or  
Post Traumatic Growth

Trauma  
Trauma is an event, action, or condition that damages, disrupts, distorts, destroys or changes in some fundamental way, how we see ourselves, our relationships, and or our world. These changes manifest consciously and unconsciously, implicitly and explicitly, and frequently involve changes in thoughts, emotions, five sense perception, inner body sensations, and movement (or impulse to move). Levy, 2011.

Posttraumatic Stress  
a construct of negative psychological change that occurs as the result of one’s struggle with a highly challenging, stressful, and traumatic event

Posttraumatic Growth  
A construct of positive psychological change that occurs as the result of one’s struggle with a highly challenging, stressful, and traumatic event  
(Tedeschi & Calhoun, 2004)
Types of Trauma

Terr’s Type I

Post Traumatic Stress Disorder—major elements
Big T-Trauma (Shapiro)

- repeated reliving of memories of the traumatic experience
- avoidance of reminders of the trauma, and the numbing, detachment, and emotional blunting that often coexist with intrusive recollections pattern of increased arousal

Terr’s Type II

Complex PTSD

Disorders of Extreme Stress Not Otherwise Specified—major elements
Developmental Trauma Disorder
Big T and little t-traumas (Shapiro)

- alterations in the regulation of affective impulses
- alterations in attention and consciousness
- alterations in self perception
- alterations in relationships with others
- somatization
- alterations in systems of meaning

(van der Kolk, 2003, in Solomon & Siegel)
Extradevelopmental Tasks and Developmental Derailment

- Developmental Opportunity Loss
- Substitute care
- Death of a caregiver
- Sexual abuse

Intervention
## Developmental Impact of Exposure to Violence and Trauma

<table>
<thead>
<tr>
<th>Age</th>
<th>Development/psychosocial Tasks</th>
<th>Complications from Violence Exposure</th>
<th>Common survival/coping strategies</th>
</tr>
</thead>
</table>
| Conception - Birth | Musculoskeletal development  
Circulatory system development  
Digestive system development  
Neurological development | Permanent neurological impairment  
Deformity  
Developmental delays | Denial of impact of violence on developing fetus  
Continued exposure from mother and others |
| Birth – 1 year     | Attachment, bonding, reciprocity, gross motor development | Attachment difficulties  
Feeding problems  
Other developmental delays  
Neurological impairment  
Lack of attunement/empathic engagement | Ambivalent/insecure attachment, frustration from caregiver, problems with nurturing, vulnerability of caregiver for violence toward fetus |
| 1-2 years old      | Development of rituals, increased autonomy, increased motor development, attachment, cognitive skills, egocentrism, beginning of separation-individuation | Attachment difficulties  
Developmental delays  
Neurological impairment | Withdrawal and/or aggressivity by toddler; anxious, ambivalent or disorganized attachment; frustration from caregiver, inconsistent parenting |
| 2-5 years old      | Social skills, identification with caregivers, fantasy play, conscience, language, toileting, sexual awareness/identity, awareness of “outside” world | Problems with transitions  
Difficulty self-soothing  
Attentional difficulties  
Hyperarousal/Hypoarousal  
Separation anxiety  
Other anxiety concerns | Regressive behaviors  
Aggressive behaviors  
Non-compliance (dissociation)  
Isolation/depression |
| 6-10 years old     | Cooperative play, stronger sense of conscience, defense mechanisms develop | Cognitive delays  
Diagnoses assigned: ADHD, ODD, CD, OCD, SAD | Internalized reactions (somatization, fantasizing, social withdrawal)  
Hypervigilance  
Dissociation/isolation |
| 11-18 years old    | Puberty, sexual relationships, abstract thinking, rapid physical growth, identity development, goal setting increased autonomy, ambivalence about autonomy | Forestalled identity development  
Externalized locus of control  
Dependence  
ADHD, Anxiety Disorders, Personality Disorders/traits develop  
Peer/relationship problems  
Decreased empathy | More internalized reactions (depression, deliberate self-harm, high risk behaviors)  
More externalized reactions (physical aggression, destruction, reckless/high-risk behaviors, substance abuse) |

Levy 2013
Loss-Anger-Rage-Revenge

LARR Cycle

Loss
unacknowledged

Anger
unexpressed

Rage
released

Revenge
self and/or another

Kenneth Hardy
## The Brain and Where Trauma “Lives”

<table>
<thead>
<tr>
<th>Hierarchy of Brain Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cortical</strong></td>
</tr>
<tr>
<td>• Abstract thought</td>
</tr>
<tr>
<td>• Concrete thought</td>
</tr>
<tr>
<td>• Problem solving</td>
</tr>
<tr>
<td>• Attention</td>
</tr>
<tr>
<td>• Inhibition</td>
</tr>
<tr>
<td><strong>Midbrain/Limbic</strong></td>
</tr>
<tr>
<td>• Attachment</td>
</tr>
<tr>
<td>• Sexual behavior</td>
</tr>
<tr>
<td>• Emotional reactivity</td>
</tr>
<tr>
<td>• Motor regulation</td>
</tr>
<tr>
<td>• Appetite/satiety</td>
</tr>
<tr>
<td><strong>Brainstem</strong></td>
</tr>
<tr>
<td>• Sleep</td>
</tr>
<tr>
<td>• Blood pressure</td>
</tr>
<tr>
<td>• Heart rate</td>
</tr>
<tr>
<td>• Breathing</td>
</tr>
<tr>
<td>• Body temperature</td>
</tr>
</tbody>
</table>
Neurodevelopmental Factors and Exposure to Trauma  
Patterns of Response to Threat  

**Autonomic Nervous System**  
**THREAT**  
(real or perceived)  

<table>
<thead>
<tr>
<th>Sympathetic Branch</th>
<th>Parasympathetic Branch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyperarousal Continuum</td>
<td>Hypoarousal Continuum</td>
</tr>
</tbody>
</table>

Hyperarousal Reaction

- Increased heart rate and breathing
- Release of stored sugar and adrenaline
- Hypervigilance
- Tune-out non-critical information
- Fight/Flight reaction

Hypoarousal Reaction

- Freezing behavior
- Release of dopamines
- Decreased heart rate
- Decreased blood pressure
- Disengagement from stimuli
Trauma and Conditioned Responses

Classically Conditioned Trauma Responses

<table>
<thead>
<tr>
<th>Stimulus</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Assault)</td>
<td>(terror, increased heart rate, rapid breathing, etc.)</td>
</tr>
</tbody>
</table>

Conditioned Stimulus 1
(offender is older man with gray hair)

<table>
<thead>
<tr>
<th>Conditioned Stimulus Response</th>
<th>(terror, increased heart rate, rapid breathing, etc.)</th>
</tr>
</thead>
</table>

Result 1: Any time survivor sees/experiences older man with gray hair, s/he experiences trauma-related responses OR any time survivor experiences increased heart rate or rapid breathing (even from exercise), becomes terrified

Conditioned Stimulus 2 (older man with gray hair is classroom teacher)

<table>
<thead>
<tr>
<th>Conditioned Stimulus Response</th>
<th>(terror, increased heart rate, rapid breathing, etc.)</th>
</tr>
</thead>
</table>

Result 2: Survivor experiences trauma-related responses in all classrooms OR any time survivor experiences increased heart rate or rapid breathing (even from exercise/P.E. class), becomes terrified

Operantly Conditioned Trauma Responses

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Reward</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Flees/dissociates in response to childhood physical abuse)</td>
<td>(Escapes significant emotional/physical harm)</td>
</tr>
</tbody>
</table>

Result: Survivor avoids/flees any situation/circumstance that feels remotely dangerous/conflictual

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Punishment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Tries to fight back/protect self in response to childhood physical abuse)</td>
<td>(Further beating, increased emotional/physical harm)</td>
</tr>
</tbody>
</table>

Result: Survivor fails to protect self in dangerous/threatening circumstances
Multiple Memory Systems

Implicit

Early Developing
Highly Functional
at Birth

Subcortical/Amygdala
Bias

Nondeclarative
Emotional
Sensory-Motor
and Visceral

Context Free
Regarding
Time, Space, and
Self-Awareness

Procedural Learning
Emotional Responses
Behavioral Patterns,
And Skill sets

Explicit

Later Developing
Matures with Hippocampus
and Cortical Structures

Cortical/Hippocampal
Bias

Declarative
Organized by Language
Related to Visual Images

Contextualized Within
Episodic and
Autobiographical
Narratives

Conscious Organization
of Experience,
Construction of a
Sense of Self

Overview of Violence-Related Symptoms and Concurrent DSM IV-TR Diagnostic Possibilities

 Violence Related Symptoms  

**Hyper-arousal continuum**
- Constant state of alert
- Adrenaline release
- Exaggerated startle response
- Hypervigilance
- Strong threat response

**Dissociative continuum**
- Constant state of fear
- Dopamine release
- Freezing behavior
- Dissociation
- Disengagement from stimuli

**Post-traumatic stress**
- Hypervigilance
- Flashbacks
- Dissociation/Numbing
- Avoidant Behavior

DSM IV Diagnoses
- Oppositional Defiant Disorder
- Impulse Control Disorder NOS
- ADHD
- Conduct Disorder
- Paranoid Personality Disorder
- Antisocial Personality Disorder
- Borderline Personality Disorder
- Generalized Anxiety Disorder
- PTSD
- ADHD
- Oppositional Defiant Disorder
- Learning Disorders
- Depression
- PTSD
- Dissociative Disorders
- Schizoid Personality Disorder
- Obsessive Compulsive Disorder
- Psychotic Disorder/Schizophrenia
- Borderline Personality Disorder (as Chronic PTSD?)
- Oppositional Defiant Disorder
- ADHD
- Bi-Polar Disorder
- Depression
- PTSD
- DESNOS

*not currently a diagnosis in DSM IV-TR*
I. Trauma
   a negatively perceived event, action, or condition that damages, disrupts, distorts, destroys or changes in some fundamental way how we see ourselves and/or our relationships and/or the world (Levy, 2013).

II. PTSD
   A. exposure to a life-threatening or traumatic event which results in a specific impact on an individual including:
   B. re-experiencing the event
   C. avoidance
   D. hyperarousal
### III. Post Traumatic Stress Disorder and Disruptive Behaviors

<table>
<thead>
<tr>
<th>Diagnostic Criteria</th>
<th>Potential Disruptive Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Traumatic Event</strong></td>
<td></td>
</tr>
<tr>
<td><strong>B. Re-experiencing</strong></td>
<td></td>
</tr>
<tr>
<td>• Intrusive thoughts, images, and perceptions</td>
<td>• Repetitive and/or aggressive play</td>
</tr>
<tr>
<td></td>
<td>• Verbal outbursts unrelated to the present activity</td>
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<td></td>
<td>• Agitated behavior</td>
</tr>
<tr>
<td></td>
<td>• Over-reaction to requests</td>
</tr>
<tr>
<td></td>
<td>• Out of proportion response</td>
</tr>
<tr>
<td></td>
<td>• Intense fear</td>
</tr>
<tr>
<td>• Recurrent distressing dreams</td>
<td>• Regular nightmares</td>
</tr>
<tr>
<td></td>
<td>• Night terrors</td>
</tr>
<tr>
<td></td>
<td>• Sleep walking</td>
</tr>
<tr>
<td></td>
<td>• Refusal to go to sleep</td>
</tr>
<tr>
<td></td>
<td>• Acting out at bedtime</td>
</tr>
<tr>
<td></td>
<td>• Repeatedly leaving room at night</td>
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<tr>
<td></td>
<td>• Sleeping in sibling's or parent's bed</td>
</tr>
<tr>
<td>• Acting or feeling as if event were recurring</td>
<td>• Yelling for no apparent reason</td>
</tr>
<tr>
<td></td>
<td>• Leaving/running away</td>
</tr>
<tr>
<td></td>
<td>• Screaming</td>
</tr>
<tr>
<td></td>
<td>• ANS responses (hyperarousal and dissociation)</td>
</tr>
<tr>
<td>• Intense distress at exposure to cues that represent the event (triggers)</td>
<td>• Specific phobias (bedtime, etc.)</td>
</tr>
<tr>
<td></td>
<td>• Out of proportion responses</td>
</tr>
<tr>
<td></td>
<td>• Swearing, yelling, crying</td>
</tr>
<tr>
<td></td>
<td>• Difficulty with certain people</td>
</tr>
<tr>
<td>• Physiological reactivity</td>
<td>• Increased heart rate</td>
</tr>
<tr>
<td></td>
<td>• Increased breathing rate/shallow breathing</td>
</tr>
<tr>
<td></td>
<td>• Increased perspiration</td>
</tr>
<tr>
<td></td>
<td>• Increased muscle tension</td>
</tr>
<tr>
<td></td>
<td>• Intimidating behaviors</td>
</tr>
<tr>
<td><strong>C. Avoidance of Stimuli or Numbing</strong></td>
<td></td>
</tr>
<tr>
<td>• Avoid thoughts, feelings, or conversations associated with the event</td>
<td>• Refusal to answer questions</td>
</tr>
<tr>
<td></td>
<td>• Resistance</td>
</tr>
<tr>
<td></td>
<td>• School avoidance/phobia</td>
</tr>
<tr>
<td></td>
<td>• Denying exposure to violence</td>
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<tr>
<td></td>
<td>• Refusing to process any trauma or conflict</td>
</tr>
<tr>
<td></td>
<td>• Refusal to accept responsibility</td>
</tr>
<tr>
<td></td>
<td>• “Spacing out” /non-compliance</td>
</tr>
<tr>
<td>• Avoid activities, places, or people who arouse memories of the trauma (triggers)</td>
<td>• Bedtime phobia and/or refusal</td>
</tr>
<tr>
<td></td>
<td>• School phobia/anxiety</td>
</tr>
<tr>
<td></td>
<td>• Refusal to engage in certain recreation activities</td>
</tr>
<tr>
<td></td>
<td>• Refusal to converse with specific people</td>
</tr>
<tr>
<td></td>
<td>• “Spacing out” /non-compliance</td>
</tr>
<tr>
<td>• Inability to recall important aspects of the event(s) or trauma</td>
<td>• Denial of event(s)</td>
</tr>
<tr>
<td></td>
<td>• Refusal to discuss or converse at all</td>
</tr>
<tr>
<td></td>
<td>• Therapy refusal</td>
</tr>
</tbody>
</table>
Rage responses when pressured

### PTSD and Disruptive Behaviors Continued

<table>
<thead>
<tr>
<th>Diagnostic Criteria</th>
<th>Potential Disruptive Behavior</th>
</tr>
</thead>
</table>
| • Detachment/estrangement from others       | • Reluctance to engage in relationships  
    • Isolation  
    • Rage responses when pressured to participate or engage |
| • Foreshortened future                      | • High risk sexual behaviors  
    • High risk criminal activities  
    • Suicidal/homicidal behavior  
    • Other dangerous or high-risk behaviors |
| D. Hyperarousal                             |                                                                                                                                                              |
| • Difficulty sleeping                       | • Bedtime refusal  
    • Leaving room many times at night  
    • Instigating conflict prior to bedtime  
    • Daydreaming/sleeping during the day |
| • Irritability or outbursts of anger        | • Yelling  
    • Out of proportion reactions to small requests  
    • General agitation |
| • Difficulty concentrating                 | • Not responding to requests  
    • Appearing “nervous” and/or “jittery”  
    • Not focusing on instructions  
    • Non-compliance (didn’t catch direction) |
| • Hypervigilance and exaggerated startle response | • Aware of everything/almost “paranoid”  
    • Asking multiple questions  
    • Challenging changes or decisions  
    • Jumping when touched  
    • Raging when touched  
    • Retaliating when touched |

*Adapted from DSM IV TR Diagnostic Criteria, Levy, 2013*
Suggested “Universal Precautions”  
Addressing Child and Adolescent Trauma  
in Community Schools

1. Ensure all school personnel have a common language to discuss child and adolescent trauma.

2. Provide on-going in-service education to teachers and school administrators about the developmental and neurodevelopmental effects of trauma.

3. Engage in “trauma informed teaching”. Understand that under any “problematic behavior” and label is the possibility for exposure to trauma and violence.

4. Remember that any child or adolescent who is in a state of hyper or hypoarousal cannot learn.

5. Create school-wide rituals that signal the beginning and end of each day; preferably rituals that seek to punctuate that school is a safe place.

6. Understand how the physical environment of a school can either exacerbate or minimize trauma-related coping strategies.
   a. Consider lighting.
   b. Consider seating arrangements.
   c. Consider time between classes.
   d. Consider noise in and between classes. Speak quietly even when tempted to yell. Remember: optimal arousal zone.

7. Understand how the physical environment of each classroom can either exacerbate or minimize trauma-related coping strategies.
   a. Build a grounding ritual at the beginning and end of each class.
   b. Experiment with furniture arrangements that support a sense of safety, minimizing crowding while also minimizing too much distance. Remember: optimal arousal zone.

8. Recognize that a teacher and/or administrator can either symbolize safety or can symbolize power and danger. This will be different for each young person.

9. Respond to “discipline problems” with empathy. It is possible to be both empathic and hold students accountable. Seek to create new patterns with power rather than replicate old, unsafe patterns.

10. Experiment! Experiment! Experiment! Even within the confines of a typical school structure, there is room for creative thinking and problem solving.
Suggested Reading References


