

Adverse Childhood Experiences (ACEs): What We Know Can Change the Future

Linda Chamberlain PhD MPH
State of Alaska Family Violence Prevention Project
Chronic Disease Prevention and Health Promotion

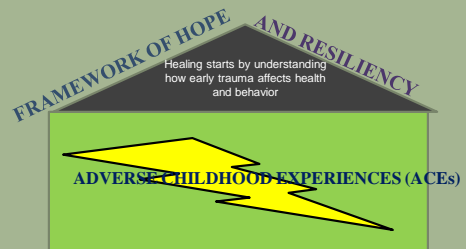
Before We Start....

- We have to take care of ourselves first to be able to help others
- Talking about how violence affects children can trigger memories & feelings
- Trauma can affect us indirectly
- It is important to have resources and plans in your program to address vicarious/secondary trauma & compassion fatigue*

What We're Talking About

- Resiliency trumps ACEs!
- The Brain Explains
- The effects of ACEs start early
- ACEs in the classroom
- Trauma-Informed schools make a difference

Trauma-Informed Approach



**ACEs MAY BE PART OF OUR PAST,
BUT THEY ARE NOT OUR DESTINY**

Resiliency=positive adaptation despite adversities



ACEs Can Be Overcome

- **Healthy relationships**
- Social and emotional skills
- Mastery of school
- Special skill
- **It's never too late**

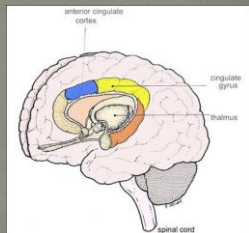
7 Crucial Cs of Resiliency

- **Competence**
- **Confidence**
- **Connection**
- **Character**
- **Contribution**
- **Coping**
- **Control**
- We are born with resilience and need to nurture it
- Unconditional love is the bedrock of resilience
- Children (and adults) have different strengths that we need to pay attention to and build on

www.fosteringresilience.com

The Most Essential Life Skill: Self-Regulation

- Anterior cingulate, located in back & mid-part of frontal lobes, associated with self-regulation (dopamine also has role)
- Self-regulation allows us to regulate our thoughts—to choose calm over chaos, hope over despair...call it character, grit, resilience—it's about quality of life (Tough, 2013)



Self-Regulation Tools

- What has been referred to as a "soft skill" is now recognized as the #1 executive function skill
- Critical that adults and children who are more survival brain-focused develop techniques for calming
- Daily activities that reinforce self-regulatory skills include:
 - Mindfulness skills (Mindful Nation, Tim Ryan, 2012) ***
 - Journaling
 - Social skills
 - Sports, yoga, playing an instrument...

Progressive Relaxation for Children

Listen carefully and do what I say, even if it sounds silly. Pay attention to your body—think about how your muscles feel when they are all wound up and tight and when they are loose and relaxed.

1. You are a furry, lazy cat and you want to stretch...stretch your arms out in front, now high above your head, higher and way back, now drop your arms to the side, let's try again and touch the ceiling
2. Be a turtle and go in and out of your shell
3. You have lemons in your hands, squeeze hard to get all the juice out, now let go, squeeze again, now drop the lemon...-----
4. Fly on your nose---no hands!
5. Here come elephants and your stomach is the bridge!

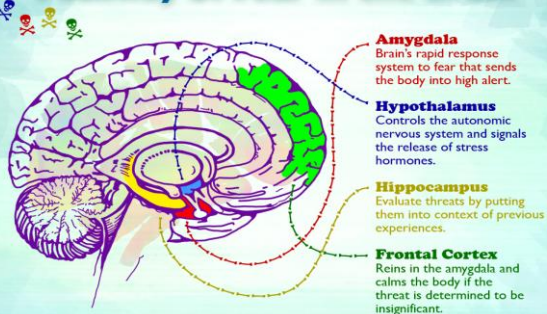
Adapted from www.yourfamilyclinic.com

Positive Stress	Tolerable Stress	Toxic Stress
<ul style="list-style-type: none"> • Normal and essential part of healthy development • Brief increases in heart rate and blood pressure • Mild elevations in hormonal levels • Example: tough test at school, Playoff game. 	<ul style="list-style-type: none"> • Body's alert systems activated to a greater degree • Activation is time-limited and buffered by caring adult relationships • Brain and organs recover • Example: death of a loved one, divorce, natural disaster 	<ul style="list-style-type: none"> • Occurs with strong, frequent or prolonged adversity. • Disrupts brain architecture and other organ systems. • Increased risk of stress-related disease and cognitive impairment. • Example: abuse, neglect, caregiver substance abuse

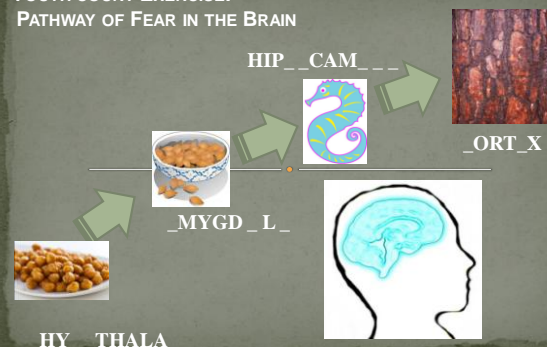
Intense, prolong, repeated, unaddressed

Social-Emotional buffering, Parental Resilience, Early Detection, Effective Intervention

Pathway of Fear in the Brain



YOUTH COURT EXERCISE: PATHWAY OF FEAR IN THE BRAIN



Maltreatment Alters Fear Circuitry in Brain

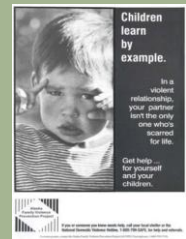
- MRI scans of adolescents' brains with a history of physical and/or emotional abuse revealed weaker connections between the prefrontal cortex and hippocampus in boys & girls
 - Hippocampus helps amygdala decide whether something is truly dangerous
- Fear circuitry can't work the way it should—*"These kids seem to be afraid everywhere."*
- Increased risk of anxiety disorders and depression



Herringa et al, 2013

Childhood Exposure to Domestic Violence

- The children "know"
- **Childhood exposure** means more than "seeing" the violence
 - hear it
 - feel it
 - See the impact of it
 - **LIVE IT AND RELIVE IT**



Nature vs. Nurture? Risk and Resiliency

Neuroplasticity=the ability of the human brain to adapt and change in response to experience and environment.



Brain Teaser "Twirl Around"

1. By age 6, a child's brain is nearly the size of an adult brain.
2. The human brain weighs about the same as an average
3. The cortex is one of the **first/last** areas of the brain to develop.

Optimal Brain Development: The Right Experience at the Right Time

Synapses = wiring of brain

At Birth: 50 trillion
1 year old: 1000 trillion
20 years old: 500 trillion



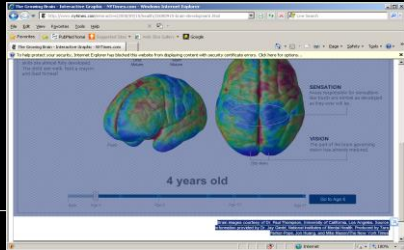
Sequential Development of a Child's Brain

Abstract Thought
Problem solving
Affiliation
Attachment
Emotional Reactivity
Motor Regulation
Sleep
Digestion
Blood Pressure
Heart Rate
Respiration
Body Temperature



Peter Canburn

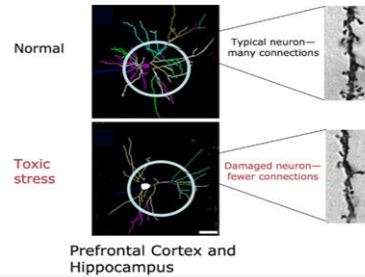
THE ADOLESCENT BRAIN: A WORK IN PROGRESS



www.nytimes.com/interactive/2008/09/15/health/20080915-brain-development.html?

Center on the Developing Child
HARVARD UNIVERSITY

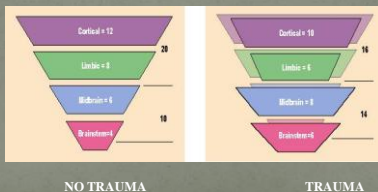
Persistent Stress Changes Brain Architecture



Sources: Radley et al. (2004)
Bock et al. (2005)

Early Trauma Can Affect Brain Development

- Organizational changes
- Brain chemistry imbalances → hypersensitive stress response
- Structural changes



What Does This Mean in Terms of Behavior?

- More impulsive, reactive brain
- “Always on the ready” (hypervigilance)
- Persistent physiological hyperarousal & hyperactivity
- Less able to get to the “thinking/rational” brain under stress
- Even greater need to teach social emotional skills
- Empathy & compassion***

Toxic Stress Interferes with Ability to Learn

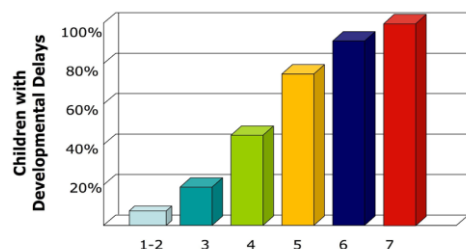
- Exaggerated and prolonged response to stressors
- Affects ability to regulate emotions and behavior



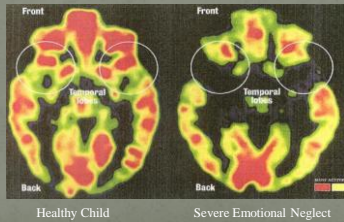
Youth struggling with self-regulation may not communicate needs in clear, direct manner → look past behavior to find hidden need

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Significant Adversity Impairs Development in the First Three Years



HANGING OUT IN SURVIVAL BRAIN



Most Powerful Protective Factor: Supportive, Attentive Caregivers

- Nurturing relationships can buffer effects of toxic stress
- Attachment-promoting behaviors can change child's brain
 - Asthma study
 - Epigenetics



Attachment Can Be A Juggling Act

- Dysregulated child rarely communicates needs in clear, direct manner
- Helping caregivers to look for the real meaning behind the message—"I hate you!" → "I need a hug"
- Looking past behavior to find hidden need
- Responding to what the child needs vs. "deserves" based on their behavior

Terra Bovington

"There's a bit difference between attention-seeking behavior and children seeking connection."

Avis Smith, Head Start Trauma Smart

Take a Deep Breath and Watch the Turtle on Your Tummy

- Children need simple strategies to calm their amygdala
- Deep breathing helps children to focus and calm down



<https://vine.co/v/hHJjpO3i9M2>

Head Start Trauma Smart: Kansas & Missouri

- Crittenton Children's Center with support from RWJ
- Based on ARC (attachment, self-regulation & competency)
- Training and mentoring teachers & caregivers to understand how trauma affects the brain and what that looks like in daily life
- Validate children's emotions & provide tools to self-regulate (calm-down corners, breathing stars, tactile objects)
- Findings to date indicate children are :
 - Less anxious and emotionally reactive
 - Less aggressive or withdrawn
 - Reduced attention deficit, hyperactivity and oppositional defiant behaviors
 - Improved sleep

What Does the U.S. Military, NIH, RWJ and others know that we need to know?

Luke remembers to look at his bracelet and what he can do to calm himself....

- Take a deep breath
- Count to four
- Give yourself a hug
- If you need to, ask an adult for help

- Stand with your feet apart & cross one wrist over the other
- Breathe in through your nose slowly & lift your arms over your head so they meet
- Let your breath out slowly & bring your arms down

MindUP Curriculum PreK-2

- Teaches children how their brains work
- Skills for self regulation and managing stress through focused breathing and mindfulness
- 96% of 3-year olds in five month study increased inhibitory response (full report at <http://brainchildblog.com>)

www.thehawnfoundation.com

Social Emotional Learning (SEL) Skills

- SEL skills are learned⇒taught, modeled, and practiced
- Reduce the effects of ACEs and increase test scores
- From preschool through high school:
 - <http://casel.org/> for national review of SEL programs
 - <http://www.lions-quest.org/> - Lions Quest evidence -based program

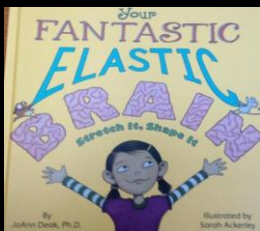


Classroom Strategies for Self-Regulation

- Survey classroom environment to reduce distractions (visual and audio)
- “Fidgets” (worry beads, disc cushions, exercise bands) help students to stay calmly focused and alert
- Very predictable schedules and use sounds (chime vs. buzzer, drum, gong) for in-class transitions

Calm, Alert and Learning by Stuart Shanker, 2013

Resources

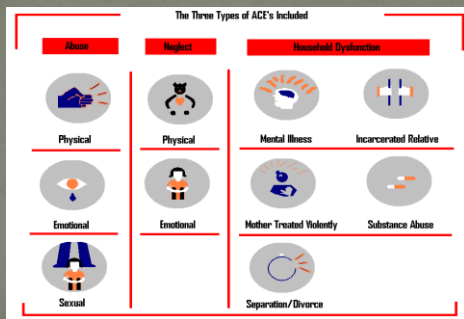


The “ACE” Study

The largest study of its kind ever to examine the medical, social, and economic consequences of adverse childhood experiences over the lifespan.



What Are Adverse Childhood Experiences?



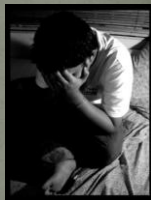
Based on Robert Wood Johnson infographic at <http://www.woodjohnson.com/infographic/what-are-adverse-childhood-experiences>

Case Scenario

1. Review the ACEs questionnaire to see examples of "ACEs"
2. Read the case scenario handout
3. Circle things that you think may be adverse experiences for John. This is not limited to ACEs that you saw in the questionnaire.
4. Add up all of the adverse experiences that you identified to create an "ACE score"
5. Now go back and read the scenario again and put two circles around anything that you think could be a strength or source of resiliency to help get through adverse experiences.

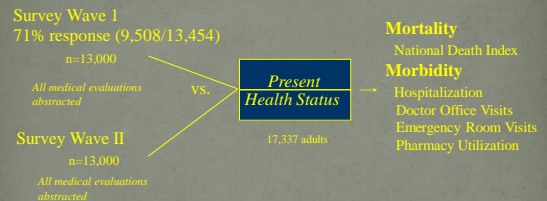
Insights about Trauma in the Classroom

- "Not realizing that children exposed to inescapable, over-whelming stress may act out their pain, that they may misbehave, not listen to us, or seek our attention in all the wrong ways, can lead us to punish these children for their misbehavior. The behavior is so willful, so intentional. She controlled herself yesterday, she can control herself today. If we only knew what happened last night, or this morning before she got to school, we would be shielding the same child we're reprimanding."



Playing a Poor Hand
Well, Mark Katz

ACE Study Design



Prevalence of Adverse Childhood Experiences

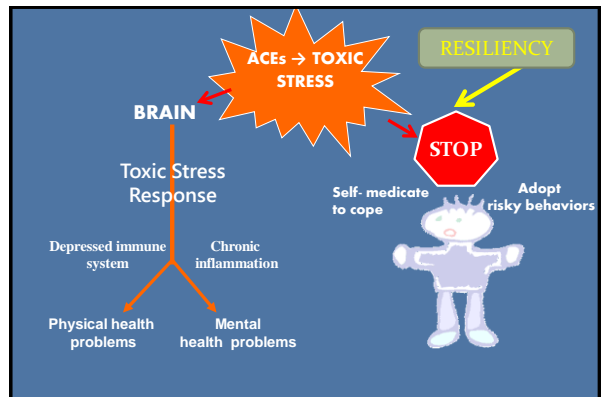
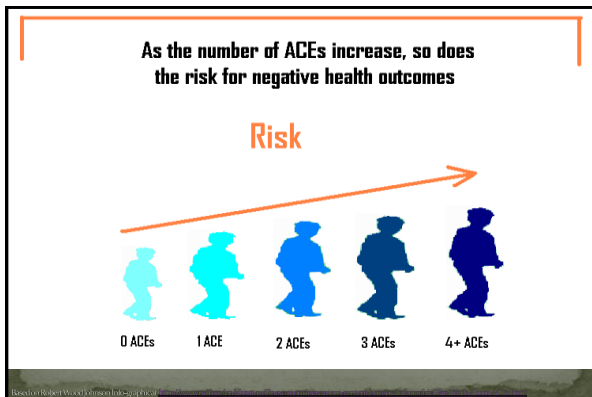
	Prevalence (%)
Abuse, by Category	
Psychological (by parents)	11%
Physical (by parents)	28%
Sexual (anyone)	22%
Neglect, by Category	
Emotional	15%
Physical	10%
Household Dysfunction, by Category	
Alcoholism or drug use in home	27%
Loss of biological parent < age 18	23%
Depression or mental illness in home	17%
Mother treated violently	13%
Imprisoned household member	5%

ACEs are Good Buddies...

ACE Score Prevalence	
0	33%
1	25%
2	15%
3	10%
4	6%
5 or more	11%*



- If any one ACE is present, there is an 87% chance *at least* one other category of ACE is present, and 50% chance of 3 or >.



The Impact of ACEs Start Early

ACEs increase the risk of:

- Childhood obesity
- Early age at first intercourse
- Teen pregnancy
- Bullying
- Dating violence
- Fighting and carrying weapon to school
- Early initiation of tobacco use
- Early initiation of drug abuse
- Early initiation of alcohol use
- Self-mutilation and suicide

Anda et al, 2002; Anda et al, 1999; Boynton-Jarrett et al, 2010; Dube et al, 2006; Dube et al, 2003; Duke et al, 2010; Hillis et al, 2001; Miller et al, 2011

What ACEs can Look Like in the Classroom

- Children with 3 or more ACEs are nearly 4 times (OR=3.66) more likely to have developmental delays (Marie-Mitchell et al, 2013)
- Children with 4 or more ACEs are 32 times more likely to have behavioral problems in school (Burke et al, 2011)

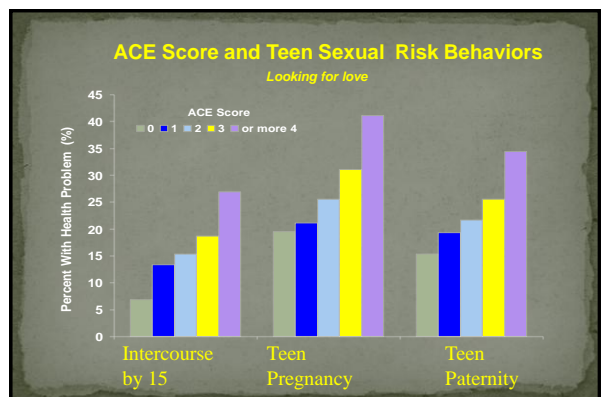
How Trauma Can Impair Learning and Impact School Performance

- Reading problems
- Speech problems
- Lower GPA
- ↑ school absences
- ↑ drop-outs, suspensions & expulsions

Symptoms include:

- Difficulty focusing
- Poor emotion control
- Unpredictable, impulsive behavior
- Overreacting to noise, physical contact, sudden movement

NCTSN, 2008



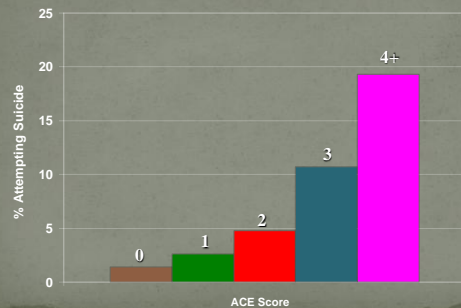
ACEs and Dating Violence

- In a nationally representative sample, ACEs were predictive of physical dating violence
- ACEs accounted for 53.4% of dating violence victimization and 56.5% of dating violence perpetration



Miller et al, 2011

ACEs and Suicide Attempts



ACEs AND TEEN ALCOHOL USE

Teens exposed to ACEs are more likely to:

- to start drinking alcohol by age 14
- say that they drank to cope during their first year of drinking



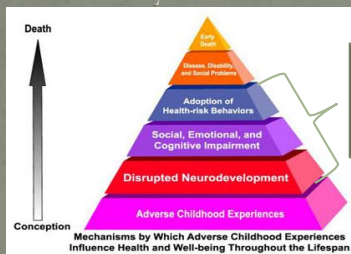
Dube et al, 2006

Trauma-informed Prevention

- Children with ACEs may drink for different reasons compared to children without these experiences (Rothman et al, 2008)
- Prevention strategies need to be trauma-informed



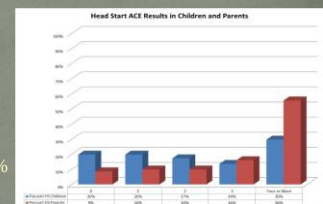
ACE Risk Pyramid and Change



Dr. Vincent Felitti and Centers for Disease Control and Prevention

Screening for ACEs in Head Start Children

- Parent report
- Adaptation of original ACE screen (0-9 items)
- Average ACEs
 - Child M= 2.6
 - Parent M= 4.0
 - 44% of children and 75% of parents have 3 or more ACEs

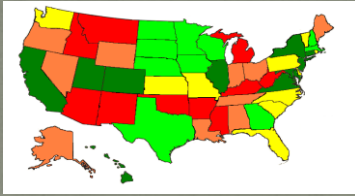


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Two or More Adverse Childhood Experiences*:

2011-2012 National Survey of Children's Health

*Childhood is defined as the period from birth to age 17. Adverse childhood experiences (ACEs) are defined as: physical, emotional, or sexual abuse; household substance abuse, mental illness, or parental divorce; and living with a family member who has been in prison or lived with a family member who has been in prison.



16%-20.1% 20.2%-22.7% 22.8%-24.3% 25.1%-27.5% 27.9%-32.9%

The Data Resource Center for Child and Adolescent Health is a project of the Child and Adolescent Health Measurement Initiative (CAHMI) supported by Cooperative Agreement 1U49CE000614 from the National Institutes of Health. With funding and direction from NCHADS, these surveys were conducted by the Centers for Disease Control and Prevention's National Survey of Children's Health. CAHMI is responsible for the analyses, interpretations, presentations and conclusions included on this site.

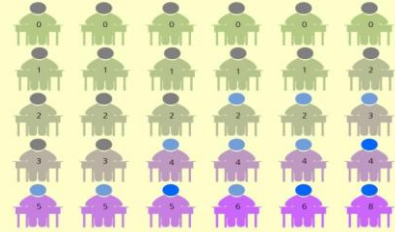
OLDER CHILDREN - High School Sophomores and Seniors

Washington School Classroom (30 Students) Adverse Childhood Experiences (ACEs)

6 students with no ACE
5 students with 1 ACE
6 students with 2 ACEs
3 students with 3 ACEs
7 students with 4 or 5 ACEs
3 students with 6 or more ACEs

58% (17) students with no exposure to physical abuse or adult to adult violence
29% (9) of students exposed to physical abuse or adult to adult violence
13% (4) of students exposed to physical abuse and adult to adult violence

Population
Average



A Different Approach

"Are you OK? This doesn't sound like you. What's going on? You look really stressed. On a scale of 1-10, where are you with your anger?"



Lincoln High School, Walla Walla, WA



Principal Jim Sporleder

Lincoln Alternative High School Student Survey

ACEs among students:

- 25% homeless
- 84% lost a loved one
- 66% feel abandoned by their parents
- 65% have immediate family member in jail
- 80% suffer serious depression
- 50% live with someone who abuses alcohol or drugs



<http://3.tinco.com/37915761>

Paradigm Shift

- Out-of-school suspension trips likelihood of juvenile justice contact within that year
- In school suspension (ISS): quiet, comforting room where student can do homework, talk with teacher about anything, sit and think about how to do things differently next time

2009 (before new approach):

- 798 suspensions
- 50 expulsions
- 600 written referrals

2010-2011 (after new approach):

- 135 suspensions
- 30 expulsions
- 320 written referrals

Compassionate School Model

- Asking kids what's going on with them
- Rule No. 1: Take nothing a raging kid (or adult!) says personally
- Rule No.2: Don't mirror the child's behavior
- Having adults that kids can count on and know that they won't hurt them
- Teaching kids new skills to manage stress and learn to down-regulate
- Trauma-informed services (ARC)

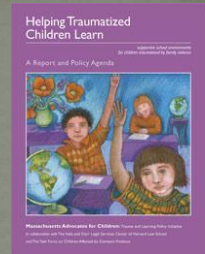
WHAT'S ARC:?

=Attachment, Self-Regulation, and Competency

- Flexible, menu of strengths-based strategies to work with traumatized youth and families
 - Relationship strengthening
 - Social skills
 - Relaxation, art/expressive, movement techniques
 - Parent education
- Evaluation with Alaskan children showed significant reductions in trauma-related symptoms (Arvidson et al, 2011)

First Steps

- “The first step in creating trauma-informed schools is to help educators become aware of the symptoms.”
- Problems such as failing to understand directions, overreacting to comments from teachers & peers, failing to connect cause and effect and poor communication are common in traumatized children



Trauma-informed Practices

- Recognize that behavioral problems may be transient and related to trauma/driven by trauma-related anxiety.
- Provide a safe place for a student to talk about what's happening and their feelings.
- Be sensitive to environmental cues that may cause a reaction in a traumatized child.
- Children cope by re-enacting trauma through play and social interactions and may try to draw or provoke you into negative replay of the trauma.

Child Trauma Toolkit for Educators, www.nctsn.org

Trauma-informed Teaching Strategies

- Discover and nurture student's “Islands of Competence”
- While routines and consistency is important for all students, it's **crucial** for traumatized children to know that their school environment is **predictable** and **physically** and emotionally safe
- IEPs for traumatized children (without disabilities)

Helping Traumatized Children Learn, 2011

Trauma-Informed Strategies



1. Survival first—kids need to feel physically and emotionally safe to be able to learn
2. Healing begins with relationships
3. Help children to know what to expect
4. Give children different ways to tell their story
5. Educate parents and children about brain development and stress management skills

Building Healthy Brains and Bodies

- Movement is essential for brain development
- Movement enhances learning & memory
- Movement can reduce stress, release trauma that gets trapped in the muscles and improve self-control

Cognitive-Behavioral Intervention for Trauma in Schools (CBITS)

- For children exposed to violence and other trauma
- 10-session, school-based cognitive behavioral group therapy
 - Developed initially for 3rd-8th graders; adapted for high schools
- RCT findings indicated significant reductions in severity of PTSD and depression symptoms, and improved psychosocial functioning

Stein et al, 2003

Universal Education with Parents

- Many caregivers may not recognize how early trauma can affect parenting and children
- Increasing caregivers' awareness about the effects of ACEs can help them to understand their own lives and make healthier choices to protect children from ACEs
- ACE Study has helped to shift thinking from "It's not what's wrong with me" to "it's about understanding what happened to me."

PARENT RESOURCE



Contact to request free copies:
Jo Gottschalk 907 269-3454
Jo.gottschalk@alaska.gov

- Designed to look like "App"-uses QR codes
- Positive, supportive approach for parents
- Universal education with embedded assessment
- Simple language and avoid stigmatizing words
- Practical strategies to reduce stress and promote resiliency