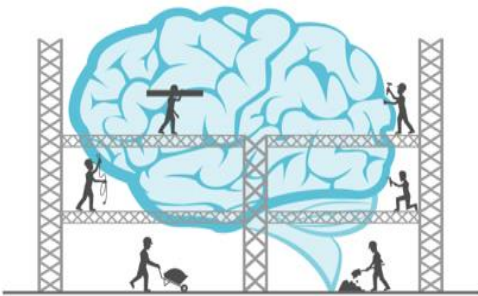


The Role of Life Experiences in Shaping Brain Development: PBIS as a Trauma-Informed School Practice

BUILDING STRONG BRAINS
TENNESSEE'S ACEs INITIATIVE



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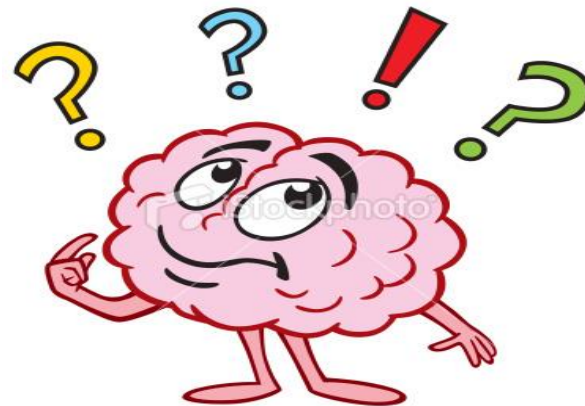
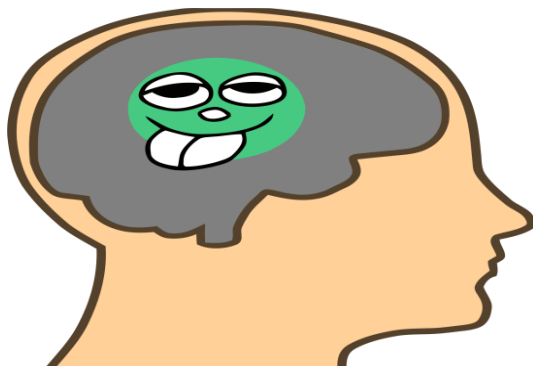
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WHY IS THIS AN EDUCATIONAL PROBLEM?

- ❖ ACEs are prevalent in American classrooms
 - ❖ Responding to ACEs is not just a mental health problem—but an educational problem
- ❖ Student responses to ACEs and toxic stress can have a profound impact on school success
 - ❖ Academic, behavioral, and social emotional performance
- ❖ Schools are often the first line of defense for buffering the impacts of ACEs *and promoting resilience* in the setting where kids spend most of their time
 - ❖ School can provide the relational milieu that students need

AN INVISIBLE EPIDEMIC

- Trauma is often hidden
 - You may not know the whole story or have a diagnosis
 - Always assume there is a good reason for the behavior
- Traumatized kids often do not act in ways that make sense to adults
 - **Counter-intuitive symptoms**



THE NEED FOR TRAUMA-INFORMED SCHOOLS

- ACES: A Great Equalizer
 - Students with ACEs are present in *every* school, regardless of demographics or SES
- The kids who need our help most are often the ones who are most difficult to engage
- Educators have tremendous power to
 - **Perpetuate ACEs or make school a place that furthers distress, or**
 - **Buffer the impacts of trauma**

THE IMPORTANCE OF TRAUMA-INFORMED SCHOOLS

Culture Eats Strategy for Breakfast.

(Drucker)

- The best educational practices will not yield optimal results without a culture of safe, stable, nurturing relationships and environments
 - PBIS is not inherently trauma-informed

Four Core Concepts of Development

- 1** ***Brain Architecture*** Is Established Early in Life and Supports Lifelong Learning, Behavior, and Health
- 2** Stable, Caring Relationships and “***Serve and Return***” Interaction Shape Brain Architecture
- 3** ***Toxic Stress*** in the Early Years of Life Can Derail Healthy Development
- 4** ***Resilience*** can be Built through “Serve and Return” Relationships, improving Self-Regulation, and Executive Functions.

Brain Architecture



The early years of life matter because early experiences affect the architecture of the maturing brain. As it emerges, the quality of that architecture establishes either a sturdy or a fragile foundation for all of the development and behavior that follows --- and getting things right the first time is easier than trying to fix them later.

Neuroplasticity

The brain changes in a variety of ways as a result of our experiences, for better or for worse.

- The brain learns through experience and repetition
- The brain is flexible or “plastic”
 - Most flexible early in life
- **Nurture shapes nature**
 - Positive experiences build healthy, adaptive brains
 - Negative experiences can negatively impact brain development
- School experiences—beyond just academics--matter

Serve and Return Interactions

“...in order to develop normally, a child requires progressively more complex joint activity with one or more adults who have an irrational emotional relationship with the child. Somebody’s got to be crazy about that kid. That’s number one. First, last, and always.”

(Bronfenbrenner, National Scientific Council on the Developing Child)

Positive Stress



Short, stressful events like meeting new people or starting the first day of school are healthy for brain development. They prepare the brain and body for stressful situations later in life.

Tolerable Stress



Tragic, unavoidable events like a natural disaster or losing a loved one aren't good for us. But if supportive caregivers are around to buffer the stress response, these events won't do lasting damage to the brain and body.

Toxic Stress



Ongoing, repeated exposure to abuse or neglect is bad for brain development. If no supportive adults are present to help buffer the stress response, stress hormones will damage developing structures in the child's brain. The result is an increased vulnerability to lifelong physical and mental health problems, including addiction.

What is Trauma/Toxic Stress?

More emotion than the brain can deal with.

- Exposure to extreme stress (in the absence of support) that dramatically undermines one's ability to cope
- Not an event itself, but rather a **response** to one or more overwhelmingly stressful events
- A natural biological response to unnatural events

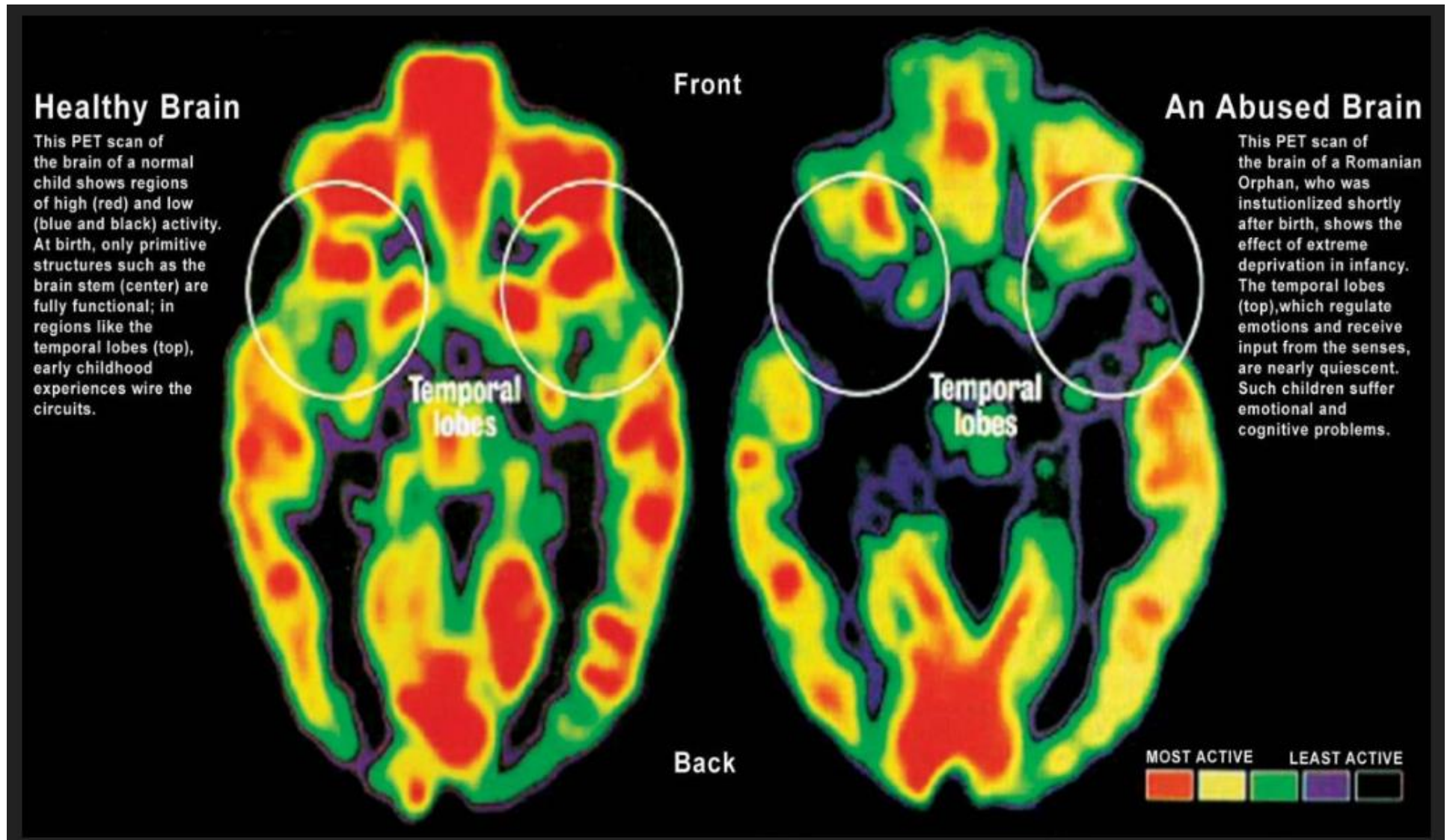
Three Core Concepts in Early Development

3 Toxic Stress Derails Healthy Development

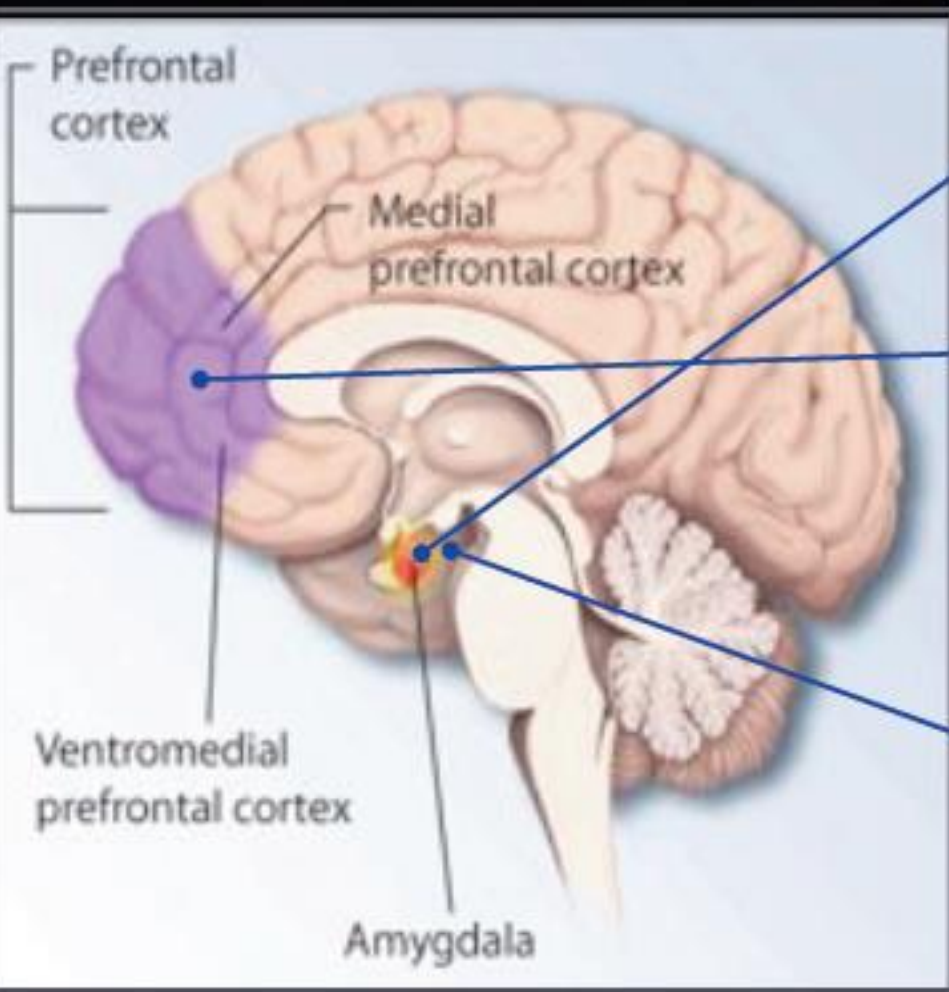
NATIONAL SCIENTIFIC COUNCIL ON THE DEVELOPING CHILD
Center on the Developing Child  HARVARD UNIVERSITY

Experience Alters Brain Development

Normal vs. Neglected Brain



What happens?



Amygdala:

activates the stress response

Toxic stress: enlargement

Prefrontal cortex:

usually a check to the amygdala

Toxic stress: loss of neurons, less able to function

Hippocampus:

major role in memory and mood

Toxic stress: impairment in understanding and emotion

Flipping Your Lid

Prefrontal Cortex:
Can I learn?

Limbic System:
Am I loved?

Brain Stem:
Am I safe?



Adverse Childhood Experiences

ABUSE



Physical



Emotional



Sexual

NEGLECT



Physical



Emotional

HOUSEHOLD DYSFUNCTION



Mental Illness



Incarcerated Relative



Mother treated violently



Substance Abuse

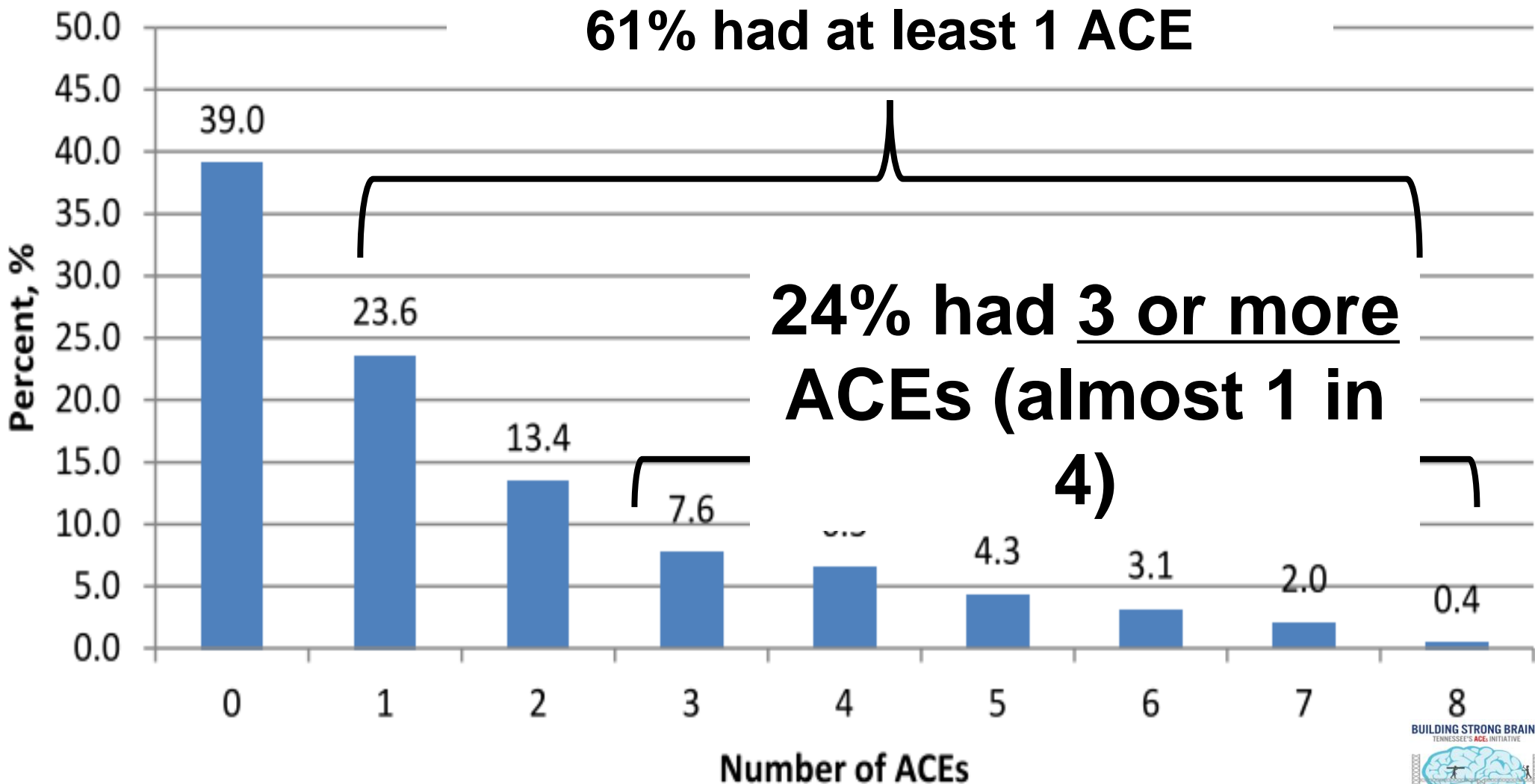


Divorce

....More Adverse Childhood Experiences

- Extreme poverty
- Homelessness
- Community violence
- Drug culture
- Unstable or chaotic home life
- Refugee experiences
- Human Trafficking
- Discrimination/ Racism
- Bullying
- Illness of a loved one or friend
- Inconsistent presence of 1 or more parent
- Frequent changes in placements/ schools
- Gentrification
- Gang culture
- Chronic exposure to violence/horror movies/pornography
- Natural Disasters
- Intrusive medical treatments
- Serious accidents

ACEs in Tennessee



Source: Tennessee Behavioral Risk Factor Surveillance System (BRFSS), 2015.

PREVALENCE ESTIMATES OF ACEs IN AMERICAN SCHOOLS

- In a typical US public school classroom, 13 of 30 students will have experienced 3 or more adverse childhood experiences
- 1 in 3 urban youth experience mild to severe symptoms of Complex PTSD
- 24% of Tennessee residents reported 3 or more ACEs in 2014
- Estimated >90% of students referred to the MNPS Behavior Support Team have known ACEs or adversity.
- Millions of US children are diagnosed with a mental illness or disability that could be *better explained* by ACEs

(Anda & Brown, 2010; Behavioral Risk Factor Surveillance System, 2014; Blodgett et al., 2013; Leahy, 2015)

ACE Study and Research:

Dose --> Response Relationship
Higher ACE Score = Higher Risk

ACEs



- Disease and injury
- Mental health problems
- Diminished well being and quality of life
- Early death

ACEs and School Outcomes:

Dose --> Response Relationship
Higher ACE Score = Higher Risk

ACEs



- Lower academic performance
- Language difficulties
- Lower standardized achievement test scores
- Behavior and discipline problems
- Social-emotional problems
- Attendance problems

(Bethell, Newacheck, Hawes, & Halfon, 2014; DeLaney-Black et al., 2002; Grevstaad, 2007; The Heart of Learning and Teaching, 2007; Jimenez, Wade, Lin, Morrow, & Reichman, 2016; Sanger et al., 2000; Shonk & Cicchetti, 2001)

Odds for Academic and School-Related Problems with Increasing ACEs

	Academic Failure	Severe Attendance Problems	Severe School Behavior Concerns	Frequent Reported Poor Health
3 or more ACEs (n=248)	3	5	6	4
2 ACEs (n=213)	2.5	2.5	4	2.5
1 ACE (n=476)	1.5	2	2.5	2
0 known ACEs (n=1164)	1	1	1	1

(Blodgett, 2012)

IMPAIRED SELF-REGULATION: ACADEMIC PERFORMANCE

Difficulties with:

- Learning and retrieval
- Attention
- Language and communication skills
- Memory and Recall
- Problem solving and analysis
- Organizing material
- Cause and effect and sequencing
- Mental Flexibility
- Engaging in the curriculum

(Helping Traumatized Children Learn, 2005)

IMPAIRED SELF-REGULATION: BEHAVIORAL AND SOCIAL/EMOTIONAL

Behavior

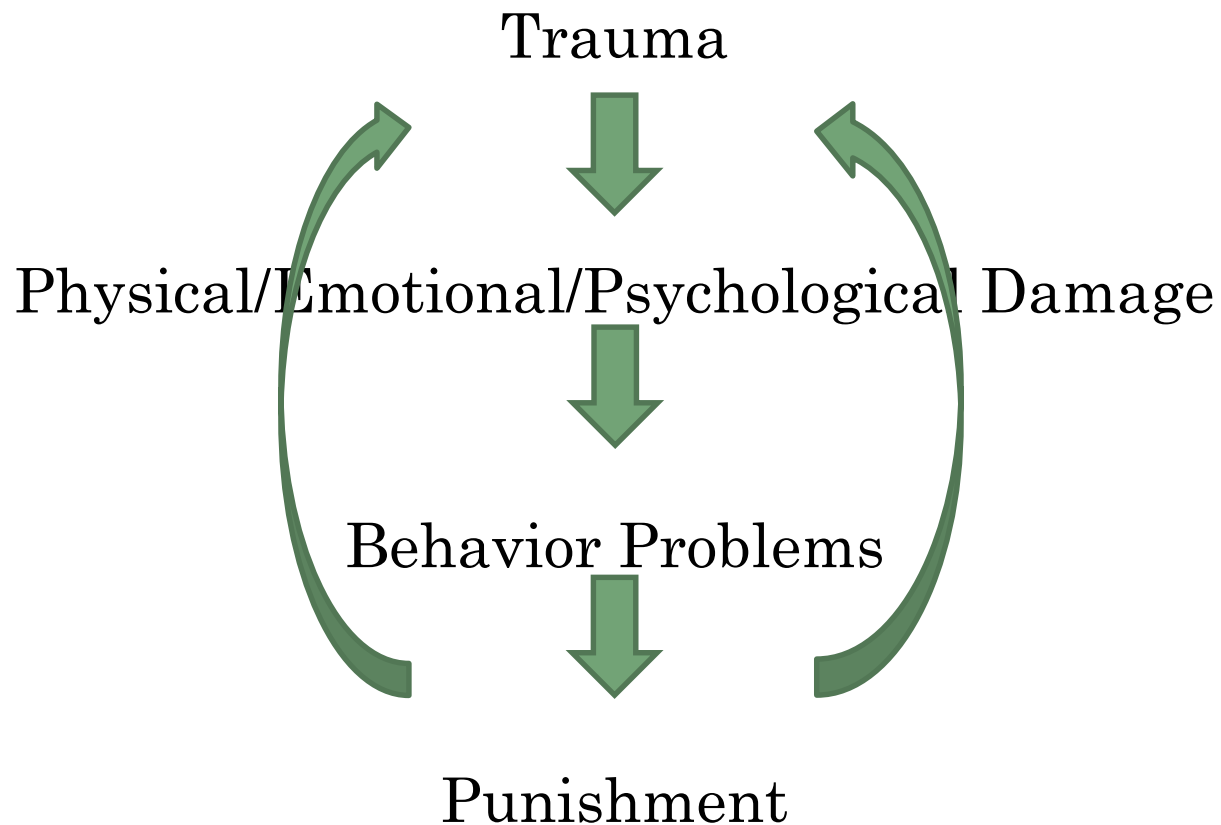
- Symptoms that look like Mental Illness (e.g., ADHD, ODD, conduct disorder, anxiety, depression)
- Impulsivity
- Aggression
- Noncompliance and Defiance
- Substance abuse/self-medicating
- Withdrawal
- Perfectionism
- Over-compliance

Social/ Emotional

- Difficulty with emotional regulation
- Social withdrawal or acting like they 'don't care'
- Relationship difficulties
- Empathy/ taking another perspective
- Reactivity
- Associating with maladaptive peers/ groups

(Helping Traumatized Children Learn, 2005)

THE CYCLE OF TRAUMA AND CHALLENGING SCHOOL BEHAVIORS



ANOTHER WAY TO THINK ABOUT CHALLENGING BEHAVIOR

“I used to think (just last spring) students misbehaved because of something I was doing in my classroom. I now approach it immediately as a symptom of something outside my classroom. This frees me to take a step back and look at the situation from a different perspective, and I always remember to breathe”

ADVERSE CHILDHOOD EXPERIENCES IN TENNESSEE

FACT **NOT** **FATE**



Like a house's foundation, brain architecture is built over time and from the bottom up. Positive experiences in infancy and early childhood can build a strong and solid foundation. Negative experiences weaken the foundation which can lead to life-long problems.

The Good News: SSNREs

Recommendations from the Centers for Disease Control

Safe

Stable

Nurturing



Relationships & Environments

WHAT IS A TRAUMA-INFORMED SCHOOL?

***Compassion* + High
Standards/Expectations = SUCCESS**

- ***Compassion*** is a feeling of empathy for another who is suffering or struggling, paired with the desire to do something to alleviate it.
 - ***Compassion is a necessity not a luxury***
- Small shifts in ***how*** we do what we do

WHAT IS A TRAUMA-INFORMED SCHOOL?

A Process (not a program).

- Professional development for all staff
 - Ability to seeing students trauma-informed lens and provide safe, stable, nurturing relationships and environments for all students
 - Viewing problem behavior as a sign of stress
 - Trauma-informed school culture and practices
- Multi-tiered systems of support
 - Sound instruction
 - Social emotional learning strategies
 - **Positive behavior interventions and supports**
 - PBIS is not inherently trauma-informed
 - Supportive approach to student discipline
 - Strategies for promoting resilience and low-stress classrooms

The New Norm: Shifting the Conversation...

What is wrong with you?

TO

What happened to you?

and

How have you managed to do so well?

What do you need?

OVERCOMING MYTHS: WHAT ARE *NOT* CHARACTERISTICS OF A TRAUMA-SENSITIVE SCHOOL ?

- *Not* a program or a specific curriculum
- *Not* about lowering academic or behavioral expectations
 - Allowing or excusing poor behavior or underperformance out of sympathy
 - Being overly lenient or coddling
 - Attributing ALL academic or behavioral struggles to ACEs
- *Not* only about mental health or tier 3 interventions
 - *Not* calling on teachers to be therapists or mental health providers

EVERY OPPORTUNITY

The Biochemical Cascade Beneath Negative Social Interactions

Feel-Good Hormones

- ↓ Serotonin
- ↓ Dopamine
- ↓ Oxytocin



Stress Hormones

- ↑ Cortisol
- ↑ Adrenaline
- ↑ Norepinephrine

- ↓ Learning
- ↓ Memory
- ↓ Motivation
- ↓ Self-Regulation (Behavior, Emotions, Attention)

The Biochemical Cascade Beneath Positive Social Interactions

Feel-Good Hormones

- ↑ Serotonin
- ↑ Dopamine
- ↑ Oxytocin



Stress Hormones

- ↓ Cortisol
- ↓ Adrenaline
- ↓ Norepinephrine

- ↑ Learning
- ↑ Memory
- ↑ Motivation
- ↑ Self-Regulation (Behavior, Emotions, Attention)

RESILIENCE: THE OTHER SIDE OF TRAUMA



Humans have an astounding capacity to use challenging life experiences to create richer and more meaningful ways of living.

PROMOTING RESILIENCE THROUGH EXECUTIVE FUNCTIONING

(Center on the Developing Child at Harvard University)

- A range of supportive classroom strategies that:
 - Reduce stress
 - E.g., mindfulness, peace corners
 - Foster social connection
 - Incorporate creative play and exploration
 - Incorporate movement and physical exercise
 - Incorporate brain breaks
 - Increase complexity of skills step-by-step
 - Repeated practice over time

PROMOTING RESILIENCE THROUGH RELATIONSHIPS

- Resilience
 - The ability of an individual or community to withstand or rebound in the face of adversity
- Resilience is:
 - A skill that can be learned and supported
 - Highly dependent on context
 - Also highly influenced by stress
 - Focused on student strengths and ability to bounce back/ overcome

3 R'S FOR FOSTERING RESILIENCE

Resilience can be taught.

- **Relationships**
 - Safe, stable, nurturing
- **Respect**
 - Mutual, unconditional respect for each individual and their boundaries and challenges, through appropriate expectations, consequences, activities, and materials
- **Reasonable**
 - Teacher accommodations for student needs that are reasonable given the challenges of most school environments and the realities of ACEs of many students

(The Heart of Learning and Teaching, 2011)

CONCLUDING THOUGHTS

Trauma-informed application of PBIS matters.

○ My plea to you:

- Remember the kids who struggle with behavior need the most reinforcement, and to experience success the most
- Show empathy and compassion to students, families, and one another
- Keep this dialogue going in your school