

Adverse Childhood Experiences (ACE's)

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November 2018

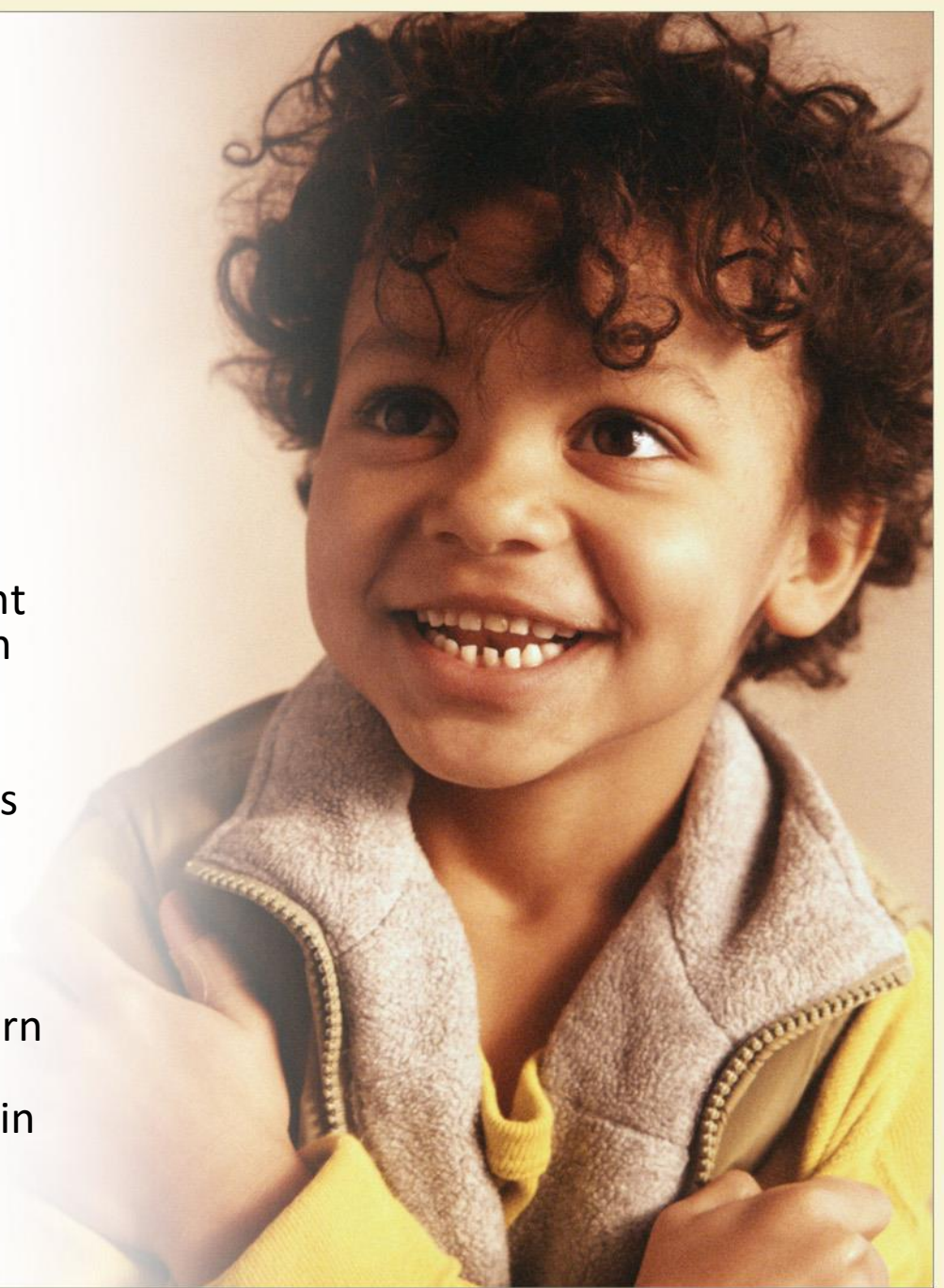


Disclosures

**WE HAVE NO FINANCIAL
RELATIONSHIPS TO DISCLOSE**

Learning Objectives

- Be able to explain key concepts from the Adverse Childhood Experiences Study, including impacts on health and behavior
- Identify how a child's environment and experiences shape early brain development
- Know that exposure to toxic stress can cause changes in brain development and function
- Be able to access resources to learn more about Adverse Childhood Experiences to share with others in your community



Overview

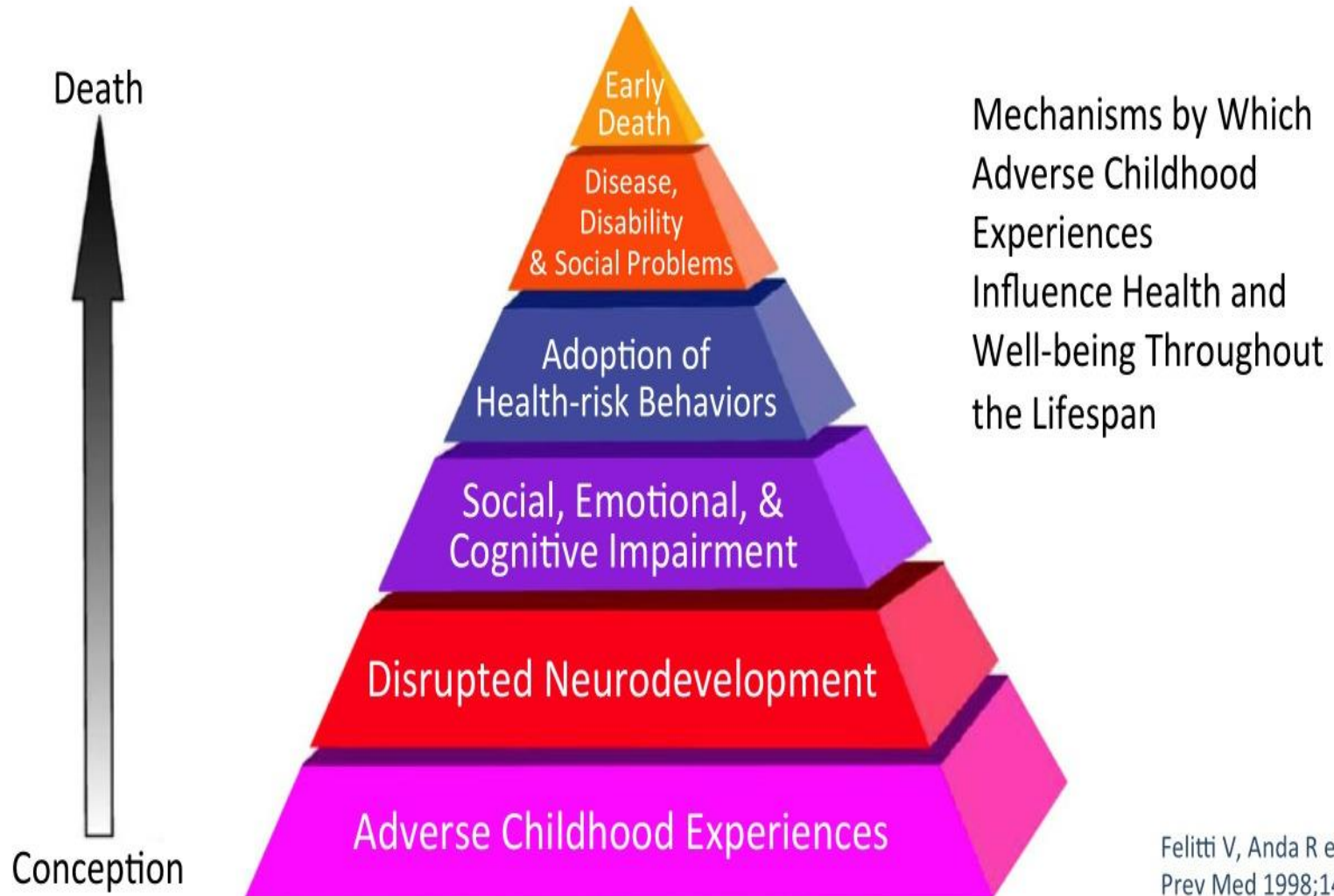
- The ACEs Study
- Toxic Stress
- Early Brain Development
- Link to Bullying
- Protective Factors
- Resources



ACE Study



ACEs and the next generation



ACE's Defined

Within the first 18 years of life:

- **Abuse**

Emotional abuse: A parent, stepparent, or adult living in your home swore at you, insulted you, put you down, or acted in a way that made you afraid that you might be physically hurt.

Physical abuse: A parent, stepparent, or adult living in your home pushed, grabbed, slapped, threw something at you, or hit you so hard that you had marks or were injured.

Sexual abuse: An adult, relative, family friend, or stranger who was at least 5 years older than you ever touched or fondled your body in a sexual way, made you touch his/her body in a sexual way, attempted to have any type of sexual intercourse with you.

- **Neglect**

Emotional neglect: Someone in your family helped you feel important or special, you felt loved, people in your family looked out for each other and felt close to each other, and your family was a source of strength and support.

Physical neglect: There was someone to take care of you, protect you, and take you to the doctor if you needed it, you didn't have enough to eat, your parents were too drunk or too high to take care of you, and you had to wear dirty clothes.

- **Household Challenges**

Mother treated violently: Your mother or stepmother was pushed, grabbed, slapped, had something thrown at her, kicked, bitten, hit with a fist, hit with something hard, repeatedly hit for over at least a few minutes, or ever threatened or hurt by a knife or gun by your father (or stepfather) or mother's boyfriend.

Household substance abuse: A household member was a problem drinker or alcoholic or a household member used street drugs.

Mental illness in household: A household member was depressed or mentally ill or a household member attempted suicide.

Parental separation or divorce: Your parents were ever separated or divorced.

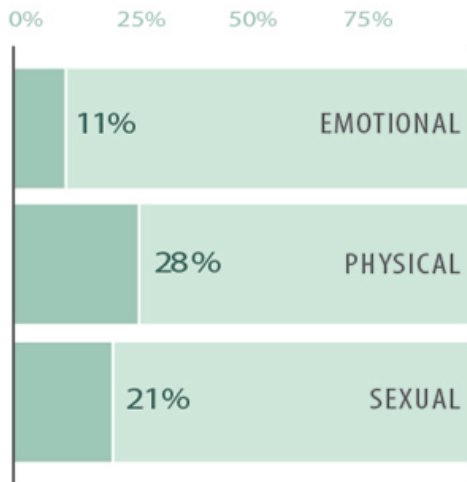
Criminal household member: A household member went to prison.

CDC- Kaiser ACE Study Results

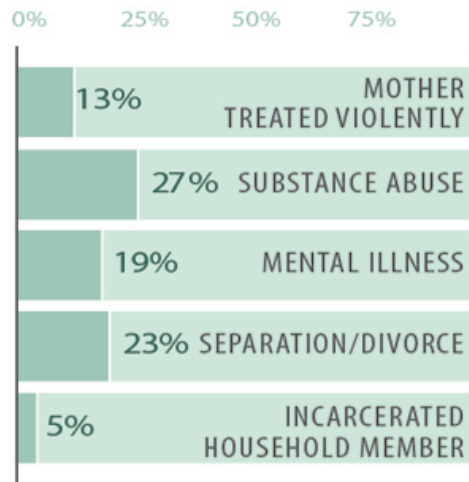
TYPES of ACES

The ACE study looked at three categories of adverse experience: **childhood abuse**, which included emotional, physical, and sexual abuse; **neglect**, including both physical and emotional neglect; and **household challenges**, which included growing up in a household where there was substance abuse, mental illness, violent treatment of a mother or stepmother, parental separation/divorce or had a member of the household go to prison. Respondents were given an **ACE score** between 0 and 10 based on how many of these 10 types of adverse experience to which they reported being exposed.

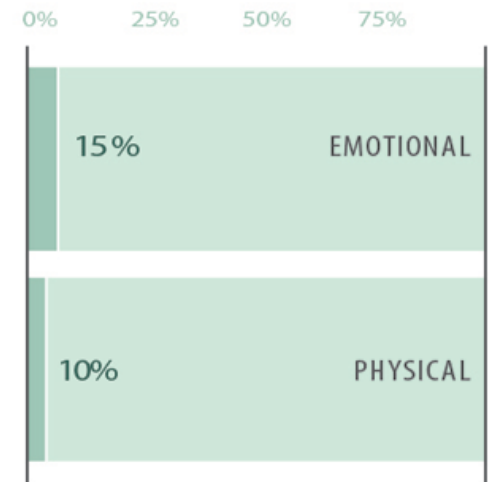
ABUSE



HOUSEHOLD CHALLENGES



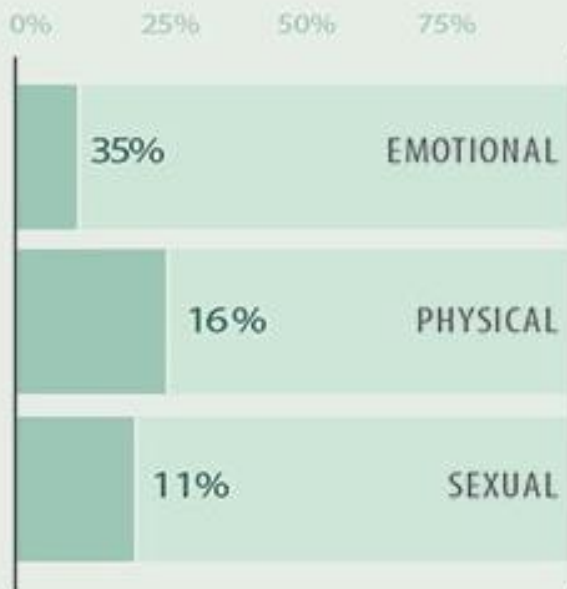
NEGLECT



Nationally Representative Survey of Adults

Prevalence of ACEs by Category for Participants Completing the ACE Module on the 2010 BRFSS

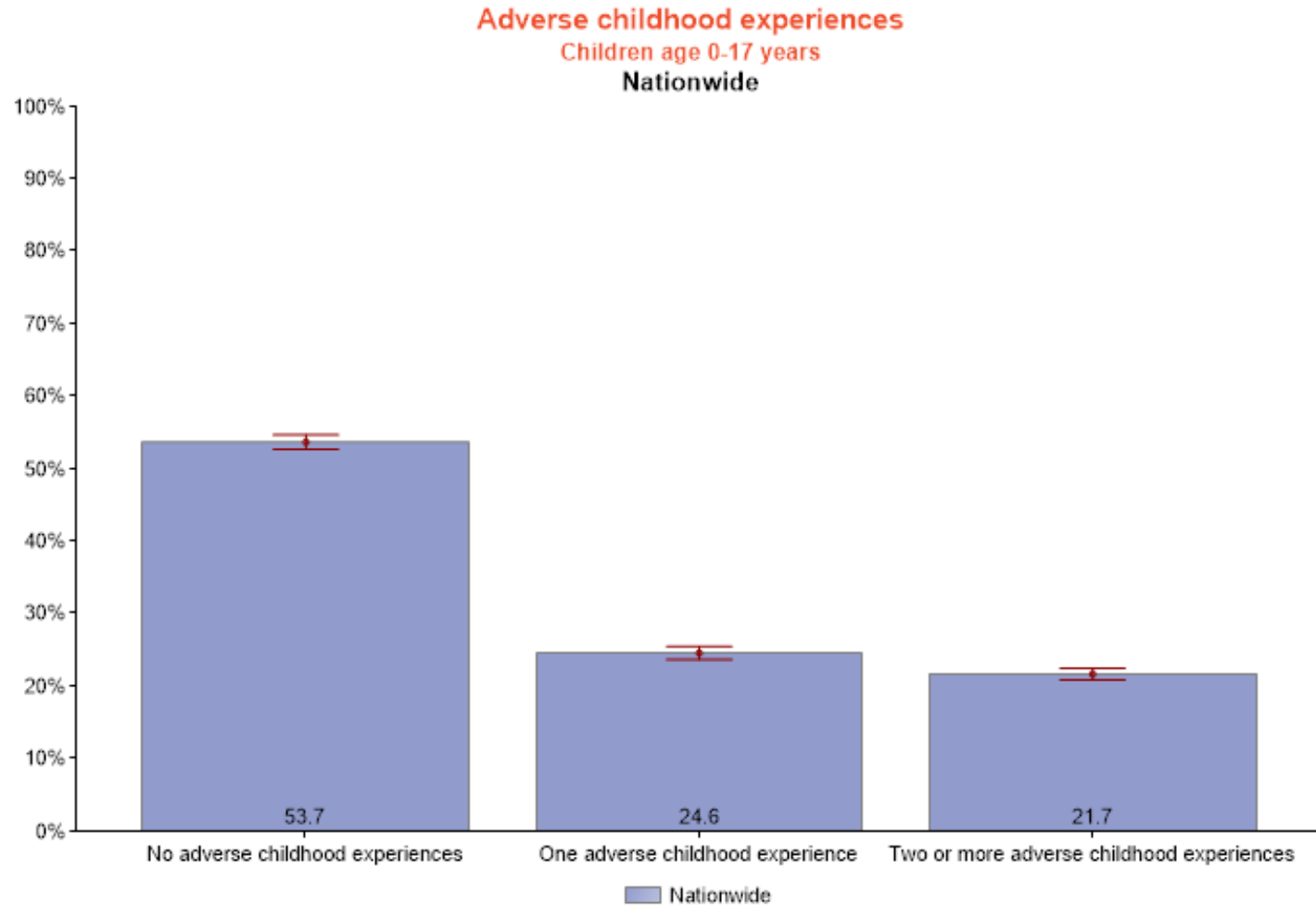
ABUSE



HOUSEHOLD CHALLENGES



Nationally Representative Sample of Children



Dose-Response Relationship

ACES can have lasting effects on....



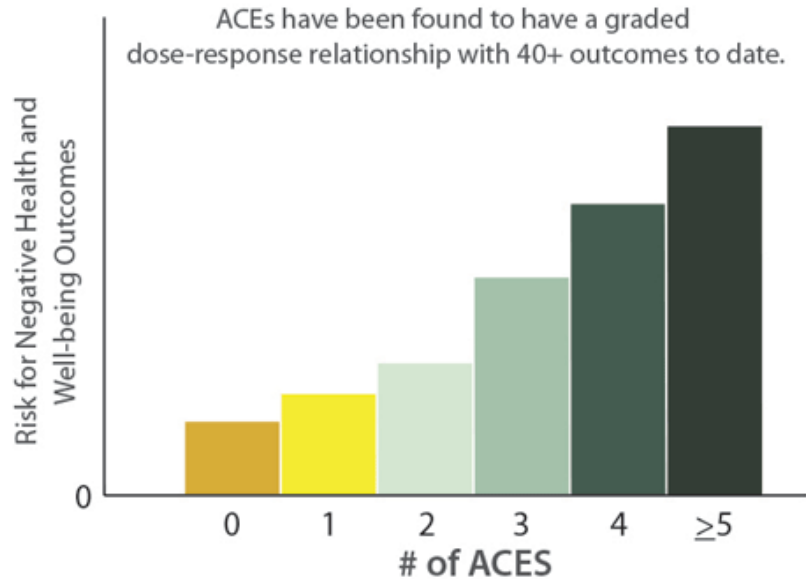
Health (obesity, diabetes, depression, suicide attempts, STDs, heart disease, cancer, stroke, COPD, broken bones)



Behaviors (smoking, alcoholism, drug use)



Life Potential (graduation rates, academic achievement, lost time from work)



*This pattern holds for the 40+ outcomes, but the exact risk values vary depending on the outcome.



The Lifetime Effects of Early Adversity & Trauma

Applying the ACE Study to Florida's Most Vulnerable Children to Help Them Thrive

CHILDHOOD TRAUMA'S IMPACT ON LIFE EXPECTANCY

On average, people with six or more ACEs died nearly **20 years** earlier than those no ACEs

ACEs:
NONE



YEARS
80

ACEs:
6+



YEARS
60

Probability of Selected Outcomes

Given 100 American Adults

33
No ACEs

51
1-3 ACEs

16
4-8 ACEs

WITH 0 ACEs
1 in 16 smokes

WITH 3 ACEs
1 in 9 smokes

WITH 7+ ACEs
1 in 6 smokes

1 in 69 are alcoholic

1 in 9 are alcoholic

1 in 6 are alcoholic

1 in 480 uses IV drugs

1 in 43 uses IV drugs

1 in 30 use IV drugs

1 in 14 has heart
disease

1 in 7 has heart disease

1 in 6 has heart disease

1 in 96 attempts suicide

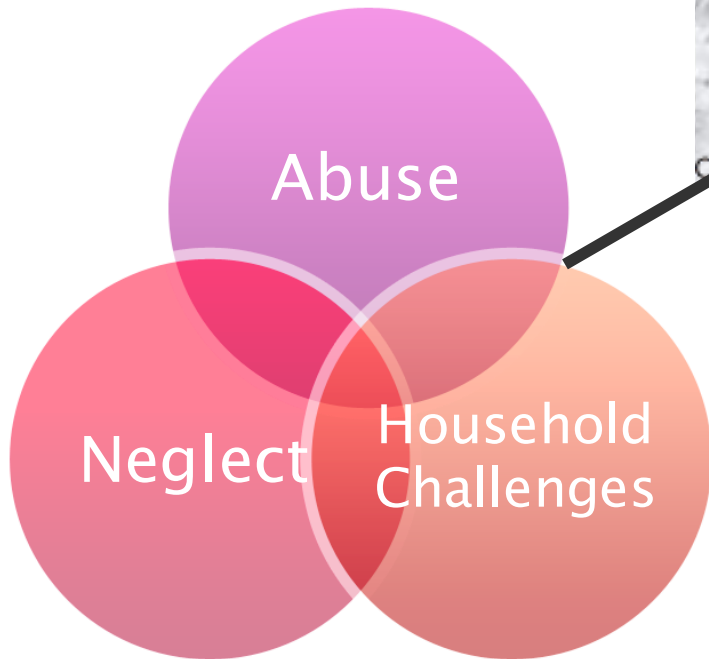
1 in 10 attempts suicide

1 in 5 attempts suicide

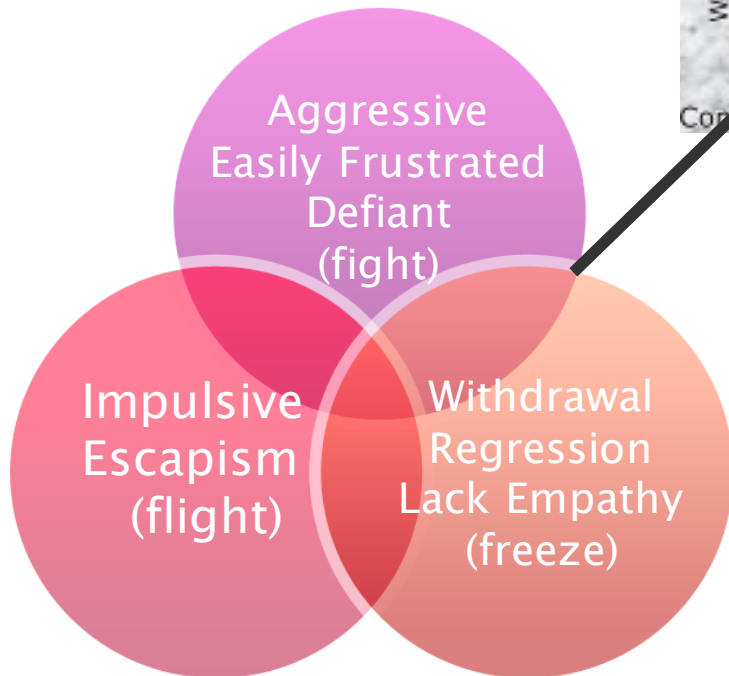
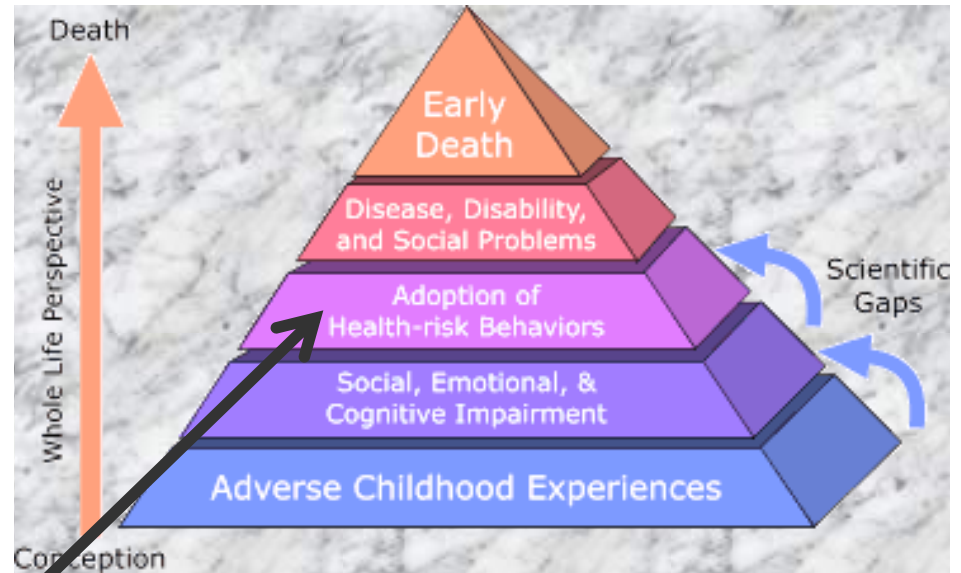
Dose Response Relationship between ACE's and...

- Chronic obstructive pulmonary disease
- Depression
- Fetal death
- Illicit drug use
- Ischemic heart disease
- Liver disease
- Poor work performance
- Financial stress
- Intimate partner violence
- Multiple sexual partners
- Sexually transmitted diseases
- Smoking
- Suicide attempts
- Unintended pregnancies
- Early initiation of smoking
- Early initiation of sexual activity
- Adolescent pregnancy
- Risk for sexual violence
- Poor academic achievement

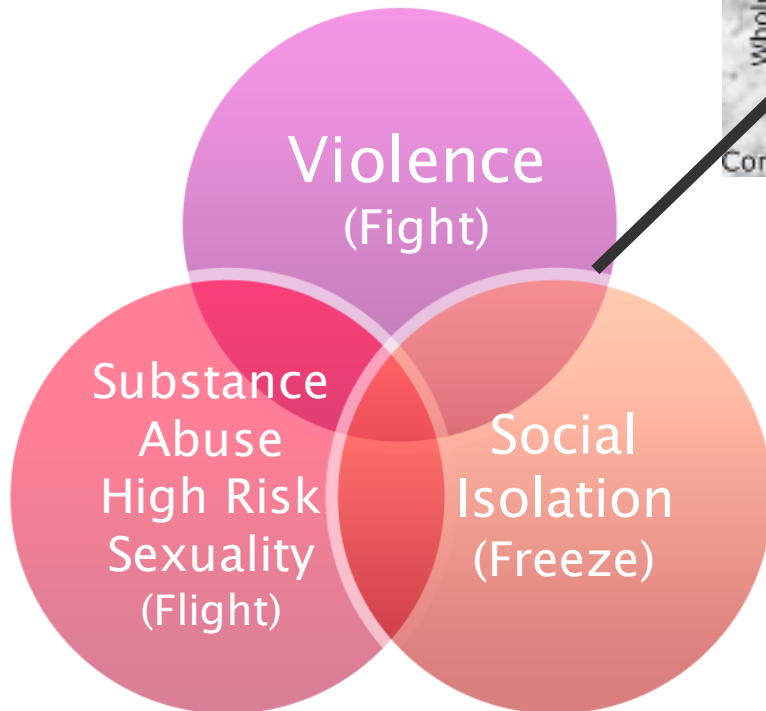
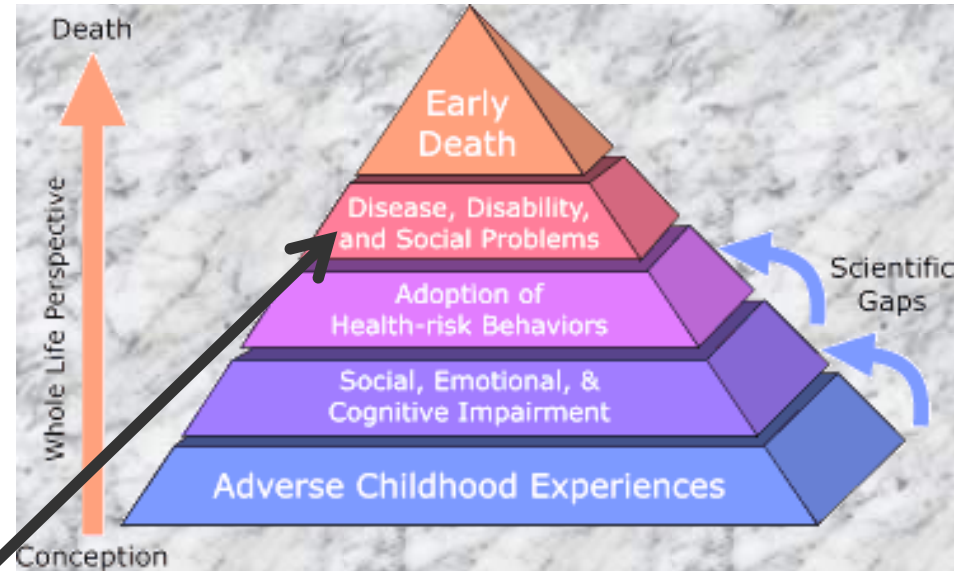
Underlying Themes and Implications



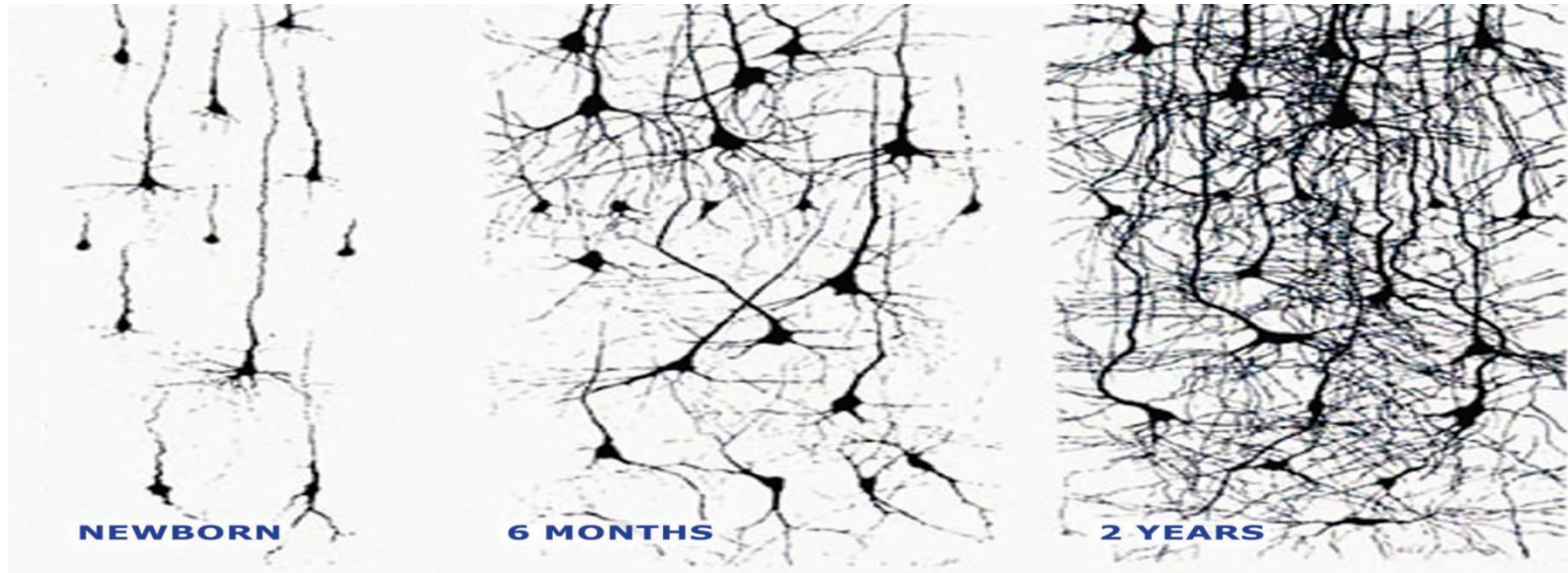
Early Behaviors



Adoption of Risky Health Behaviors



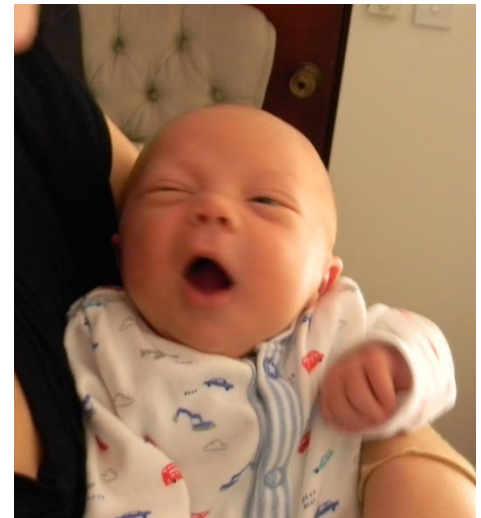
ACEs Impact Neurological Development



Infant Neural Development:

- 700 new connections per second
- Influenced by genes, environment and experiences
- Create permanent brain architecture – foundation for learning, behavior

Conel, JL, 1959; Shonkoff, Center for the Developing



Sequential Development of the Brain

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



Three Levels of Stress Response



Positive

Brief increases in heart rate, mild elevations in stress hormone levels.

Tolerable

Serious, temporary stress responses, buffered by supportive relationships.

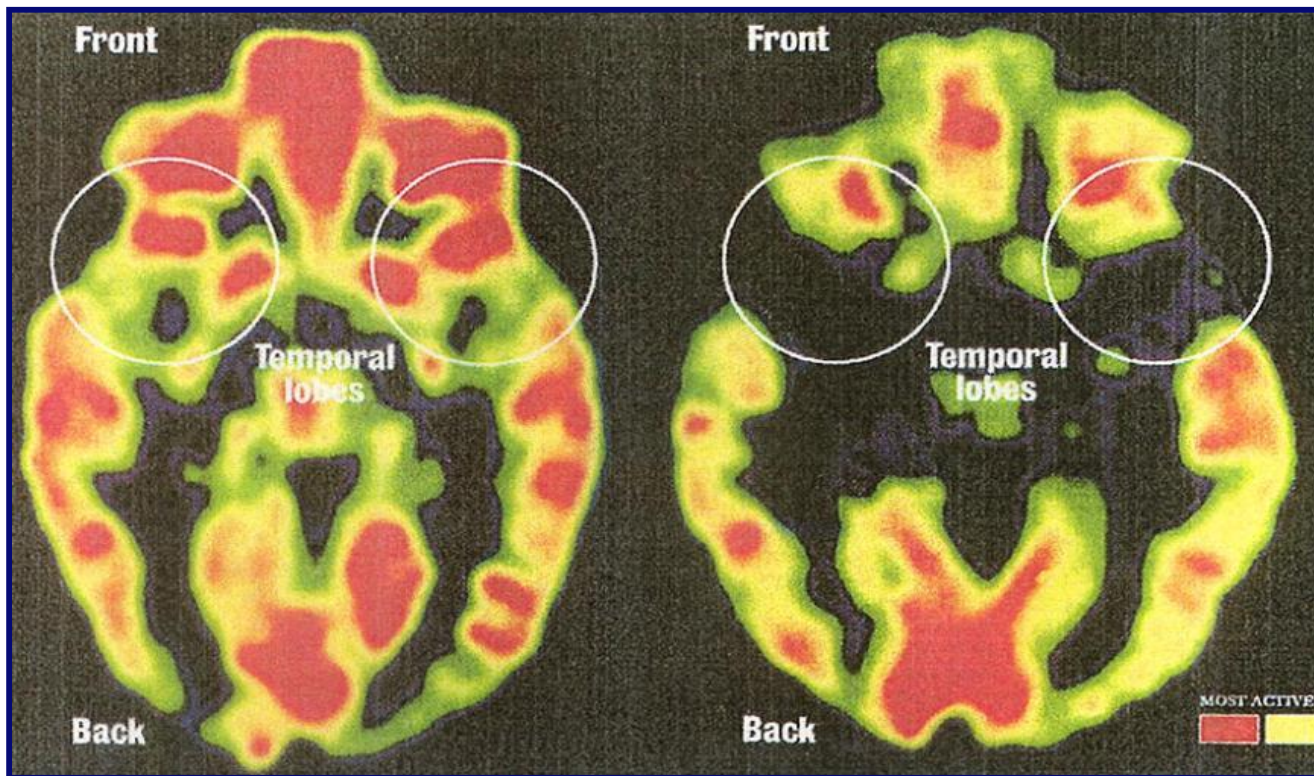
Toxic

Prolonged activation of stress response systems in the absence of protective relationships.

Toxic Stress and Brain Function

PET Scan of brain activity

- Temporal lobes help regulate emotions
- Brainstem controls fight or flight reaction



Red= high activity

Green= less active

Centers for Disease Control
and Prevention

Healthy Child

**Child with severe emotional
neglect**

Behavioral, Mental, and Social Problems Associated with Traumatic Brain Development

- Hypervigilance
- Persistent physiological hyperarousal & hyperactivity
- Impulsive aggressive behaviors
- Less able to tolerate stress
- Increased risk of physical and mental health problems
- Difficulty learning

ACEs may be risk factors for being bullied or bullying others

AND

Bullying victimization may be an adverse childhood experience and a toxic stressor



Health Problems of Children Who are Bullied

- **Anxiety**
- **Depression**
- **Suicide**
- **Homicide**
- **Eating disorders**
- **Inability to maintain healthy intimate relationships**
- **60% more likely to carry weapons**
- **70% more likely to be in fights**

Nansel TR, et al. *Relationships between bullying and violence among US Youth.*
Arch Pediatr Adolesc Med 2003;157:34-53.

CDC lists Bullying Victimization as an ACE

Symptoms of Bullying Victimization

Fight

- Unexplained cuts, bruises, scratches
- Torn clothing
- Externalizing disorders

Flight

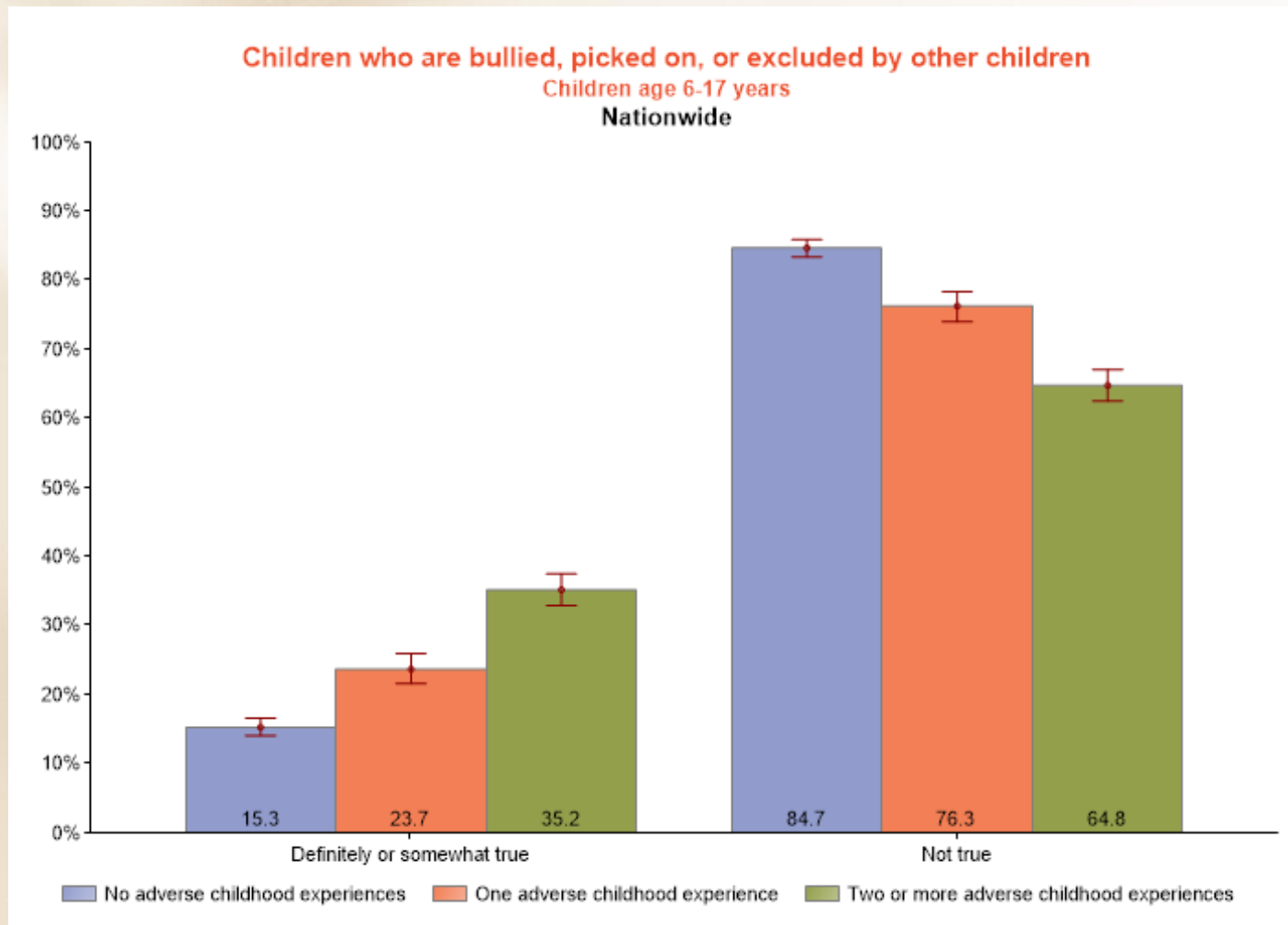
- Afraid to go to school
- Isolation
- Nonspecific complaints

Freeze

- Poor academic performance
- Sad, moody, depressed, anxious
- Loss of appetite
- Low self esteem
- Trouble sleeping
- Internalizing Disorders

Children who are bullied

2016 National Survey of Children's Health

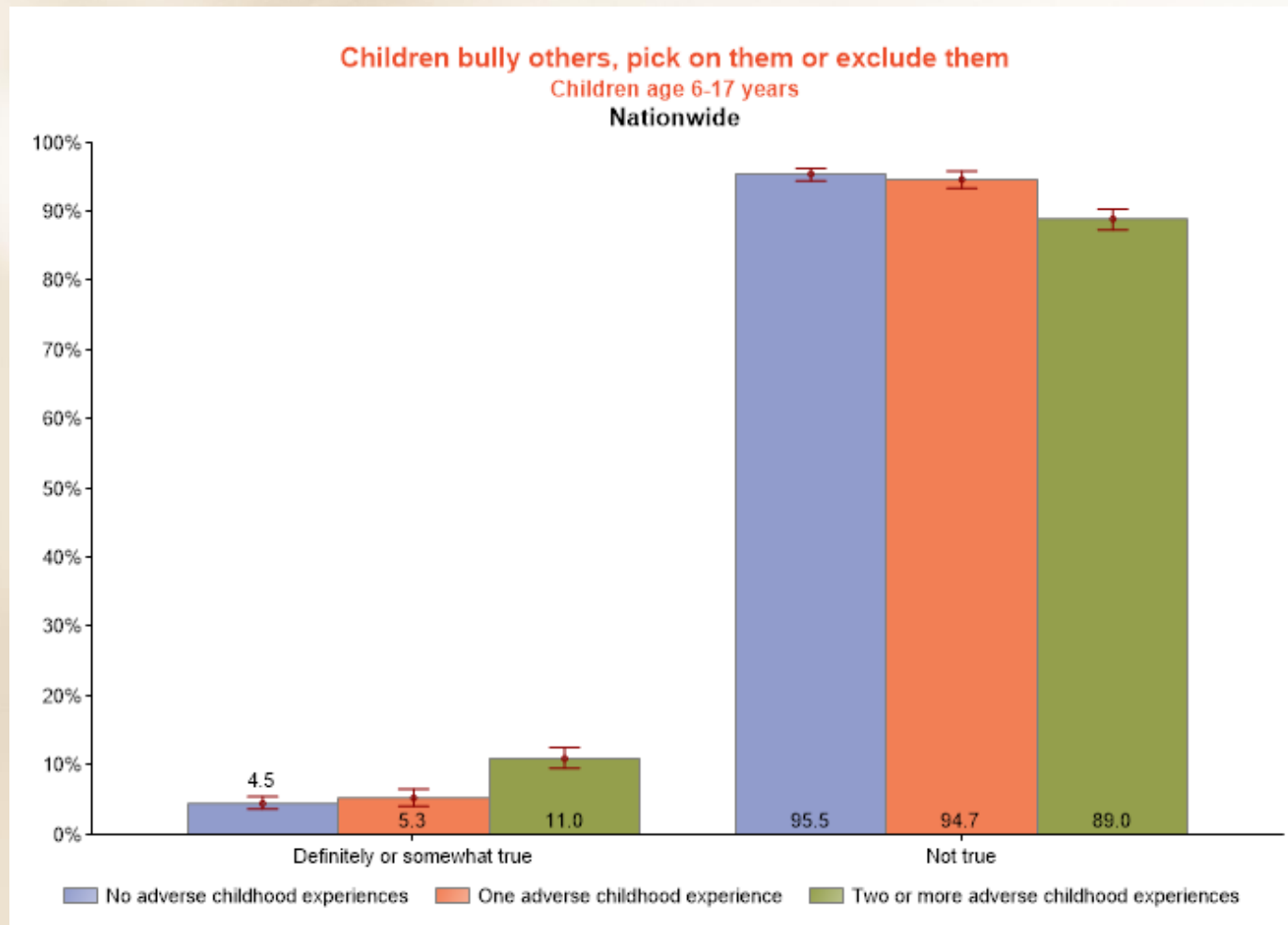


With funding and direction from the Maternal and Child Health Bureau, the National Survey of Children's Health was conducted by the United States Census Bureau. CAHMI is responsible for the analyses, interpretations and conclusions included on this site.

Required citation: Child and Adolescent Health Measurement Initiative. Data Resource Center for Child and Adolescent Health. 2016 National Survey of Children's Health (NSCH) data query. Retrieved [10/1/2018] from www.childhealthdata.org. CAHMI: www.cahmi.org.

Children who bully others

2016 National Survey of Children's Health



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**Are neurological
changes inevitable
and irreversible?**

**What can we do to
prevent ACEs and
bullying?**



Factors that mediate traumatic experiences

- **Simple vs. complex trauma**
- **Severity of the trauma**
- **Length of the exposure**
- **Protective factors**

Three Levels of Stress Response

Positive

Brief increases in heart rate, mild elevations in stress hormone levels.

Tolerable

Serious, temporary stress responses, buffered by supportive relationships.

Toxic

Prolonged activation of stress response systems in the absence of protective relationships.

Center on the Developing Child / Harvard University

Protective Factors

- Nurturing and attachment
- Knowledge of child and youth development
- Parental resilience
- Social connections
- Concrete supports for parents
- Social and emotional competence of children

<https://www.childwelfare.gov/topics/preventing/promoting/protectfactors/>

CDC Bullying Prevention Fact Sheet

How can we stop bullying before it starts?

The good news is that bullying is preventable. CDC's *A Comprehensive Technical Package for the Prevention of Youth Violence and Associated Risk Behaviors* helps communities and states prioritize youth violence prevention strategies based on the best available evidence.⁵ The strategies and approaches in the technical package are intended to impact individual behaviors as well as the relationship, family, school, community, and societal factors that influence risk and protective factors for violence. The strategies are meant to work together and be used in combination to prevent violence. These approaches, including establishing universal school-based programs to strengthen youth's skills, and modifying physical and social environments for youth's protection have evidence for reducing violence or key risk factors for violence and bullying.

1 in 5 high school students reported being **bullied** at school in the last year.



Common types of bullying:

Physical

hitting, kicking, punching, spitting, tripping, pushing



Emotional

teasing, name calling, inappropriate sexual comments, or verbal or written threats



Social

excluding someone, spreading rumors, making embarrassing comments



Promote family environments that support healthy development

- Early childhood home visitation
- Parenting skill and family relationship programs



Provide quality education early in life

- Preschool enrichment with family engagement



Strengthen youth's skills

- Universal school-based programs



Connect youth to caring adults and activities

- Mentoring programs
- After-school programs



Create protective community environments

- Modify the physical and social environment
- Reduce exposure to community-level risks
- Street outreach and community norm change



Intervene to lessen harms and prevent future risk

- Treatment to lessen the harms of violence exposures
- Treatment to prevent problem behavior and further involvement in violence
- Hospital-community partnerships

1-800-CDC-INFO (232-4636) • www.cdc.gov/

<https://www.cdc.gov/violenceprevention/pdf/bullying-factsheet.pdf>

Recommendations by the Centers for Disease Control and Prevention

- Trauma-sensitive schools
- Social-Emotional Learning
- Mindfulness
- Circle Discussions
- Restorative Justice

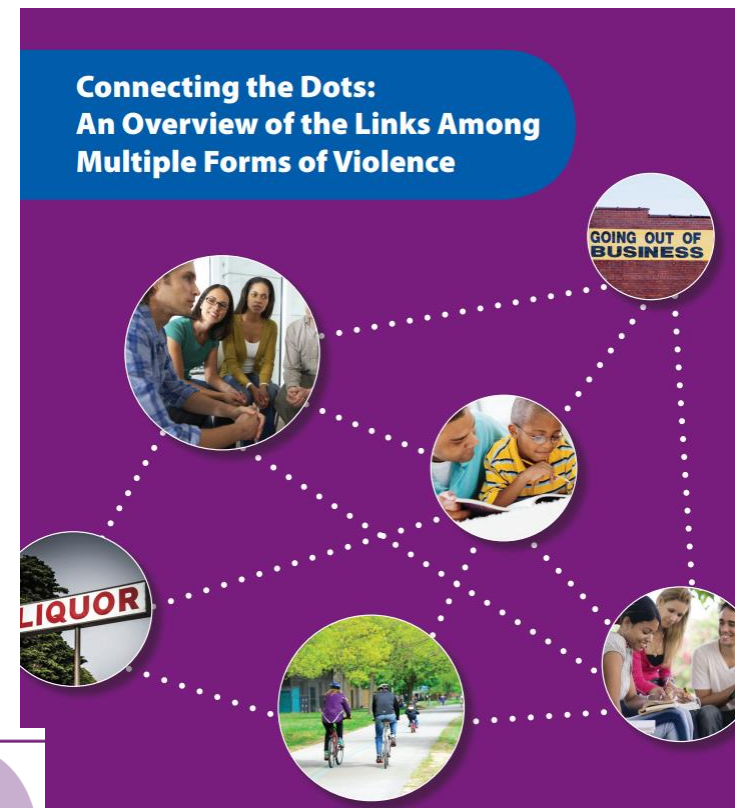


Connecting the Dots: An Overview of the Links Among Multiple Forms of Violence

“Gang violence is connected to bullying is connected to school violence is connected to intimate partner violence is connected to child abuse is connected to elder abuse. It’s all connected.”

-Deborah Prothrow-Stith, MD,
Adjunct Professor, Harvard School of Public Health

https://www.cdc.gov/violenceprevention/pdf/connecting_the_dots-a.pdf



Centers for Disease
Control and Prevention
National Center for Injury
Prevention and Control



“Professionally we have silos, and we operate in these silos we’ve got to break down. Across the country, people working to prevent child abuse are right across the hall from people working on violence against women, and they don’t work together. As we go into communities to bring everybody to the table, don’t let people say, ‘I work on child abuse, but this is about gang violence.’ Don’t let people say, ‘I work on violence against women, and this is about child abuse.’ This thing, all this violence, is connected.”

-Deborah Prothrow-Stith, MD,
Adjunct Professor, Harvard School of Public Health

Where to turn for help - Resources

- ***Adverse Childhood Experiences***, CDC Available at: <https://www.cdc.gov/violenceprevention/acestudy>
- **Evidence based Programs**
 - Office of Juvenile Justice and Delinquency Prevention Model Programs Guide Available at: <https://www.ojjdp.gov/mpg/>
 - Center for the Study and Prevention of Violence, University of Colorado Available at: <https://cspv.colorado.edu/blueprints/>
 - Youth.gov Interagency Working Group on Youth Programs Available at: <https://youth.gov/evidence-innovation#program-directory>
- ***Preventing Youth Violence: Opportunities for Action***, Centers for Disease Control and Prevention National Center for Injury Prevention and Control, Available at: <https://www.cdc.gov/violenceprevention/youthviolence/pdf/opportunities-for-action.pdf>

In Summary...

1

Exposure to Adverse Childhood Experiences and toxic stress affect early brain development and may lead to changes in function, structure, and stress response.

2

Adverse Childhood Experiences place children at risk for being bullied and/or bullying others AND bullying may be an adverse childhood experience and toxic stressor

3

Need a trauma informed approach in bullying intervention and prevention

4

Collaborate with staff and other agencies to create safe spaces for children and youth

Acknowledgements

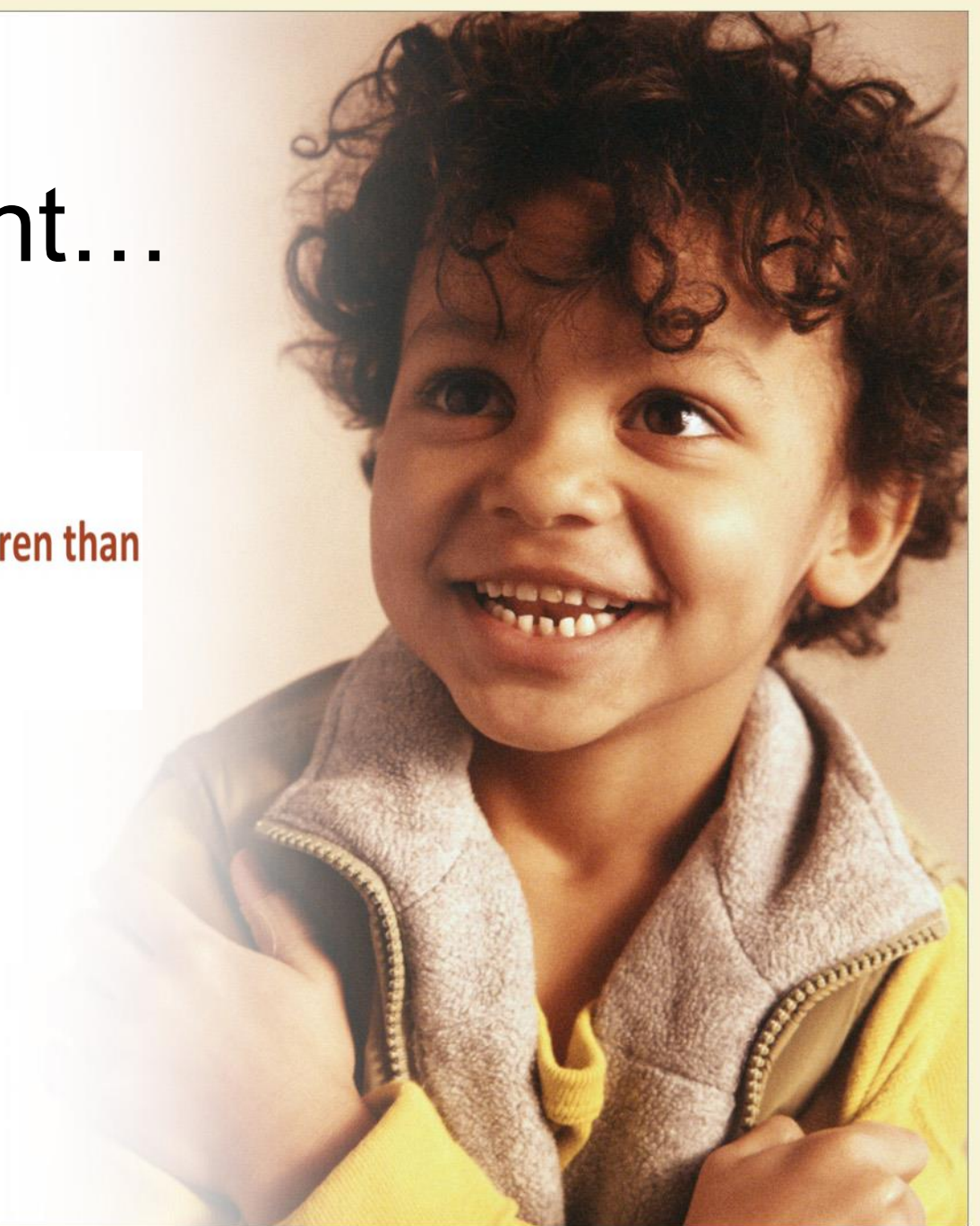
- Stopbullying.gov
- Centers for Disease Control and Prevention
- Child and Adolescent Health Measurement Initiative. Data Resource Center for Child and Adolescent Health
- Institute for Safe Families, Linda Chamberlain and Megan H. Bair Merritt



Final thought...

**“It is easier to build strong children than
to repair broken men.”**

– Frederick Douglass (1817–1895)





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