



# Adverse Childhood Experiences

*Presented by  
Joe Neigel & Erin Wood*

*Thank You for your participation  
and partnership!*





## *Joe Neigel, BA, CPP*

Joe Neigel is Monroe School District's Prevention Services Manager, where he supervises the Behavioral Health Team and the implementation of tiered, evidence-based strategies to address substance use, mental health and suicide. Joe also coordinates the Monroe Community Coalition and is recognized across Washington State as an expert speaker on the topics of substance abuse prevention, Adverse Childhood Experiences and evidence-based prevention kernels. His print and video community guide, "Prevention Tools: What Works, What Doesn't," is distributed statewide and nationally by the Washington State Health Care Authority. Most importantly, Joe is a daddy to five quirky, sweet and hilarious children aged 8-21.



## *Erin Wood, MA, LMHC*

Erin Wood is a licensed mental health counselor and the Behavioral Health Specialist for Monroe School District. She specializes in the prevention and intervention of youth suicide, and supports students and staff in raising awareness and understanding of mental health across the lifespan. Erin organizes the district's Crisis Recovery Team and student-focused prevention efforts including Sources of Strength and the Signs of Suicide Prevention Program. Erin loves working with students K-12, and is especially passionate about supporting the mental, emotional, and behavioral needs of every young person in our community.

*Compassion* ○ *Appreciation* ○ *Resilience* ○ *Empowerment*



# ACES 101: The Hidden Risk Factor

Understanding Adverse Childhood Experiences, Complex Trauma and What We Can Do About It!



# Our Learning Goals



**Start with the End in Mind**  
A different kind of data set



**Enhance our Understanding**  
The Adverse Childhood Experiences Study (ACES)



**Look Across Disciplines**  
Evidence-based Kernels

# CLIENT OF CONCERN – 10 Minute Breakout Session

Think about a client for whom you have concern. Discuss the following:

1. What worries do you have for this client?
2. What challenging behaviors does this client exhibit?



# Adverse Childhood Experiences Study (ACES)

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**ACES** began as study in the late 1980's and 1990's at a diet and nutrition center managed by Kaiser-Permanente in San Diego, California. It became the largest study ever to examine social determinants of health.

**Over 17,000** people participated in the study, which ultimately a direct connection between traumatic childhood experiences and health.

**Most critically,** the Centers for Disease Control and Prevention (CDC) now recognize ACES as a *public health crisis*.

*ACES Participants were mostly:*

- Middle class, average age of 57
- 80% White, 10% Black, 10% Asian
- 74% Some college
- 44% Graduated college
- 49.5% Men



*But since the original ACE study, research indicates that ACES are more prevalent for those belonging to non-dominant cultures and living in poverty...*



# THREE TYPES OF ACEs MEASURED

The original ACE study measured three types of ACEs through a 10 question assessment:

**But, there's  
actually more than  
just these...**

## ABUSE



Physical



Emotional



Sexual

## NEGLECT



Physical



Emotional

## HOUSEHOLD DYSFUNCTION



Mental Illness



Incarcerated Relative



Mother treated violently



Substance Abuse



Divorce



ACEs interact with stressors commonly faced by racial and sexual minorities—such as discrimination, stigma, and rejection—to contribute to behavior, health and opportunity disparities.



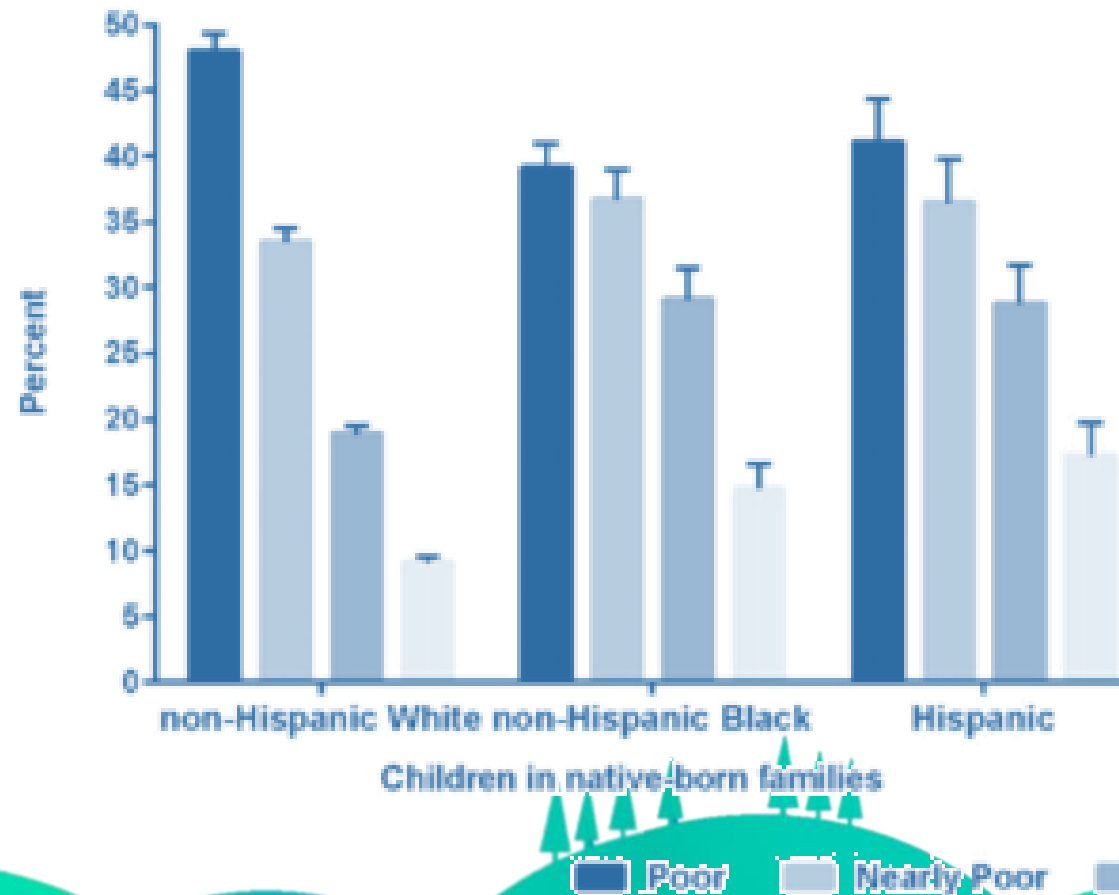
# ACEs and Intersectionality

- Ethnic and sexual minority children are significantly underrepresented in the ACEs research.
- When cultural minorities are included in the data, Black, Hispanic and LGBT children are consistently shown to be exposed to more adversities than white children.
- Similarly, those living in economically stressed communities are more likely to experience ACEs.

**This has led to a reexamination of the ACEs that predict long-term negative health and opportunity outcomes.**

# RACE, ETHNICITY AND INCOME INFLUENCE EXPOSURE

ACE Exposure by Race/Ethnicity and Income Level  
N=84,837



**Since the original ACE study, exposure to additional early life stressors are being studied.**

**Acute Trauma:** is caused by a *single* traumatic event that triggers extreme emotional or physical stress.

**Complex Trauma:** is caused by exposure to *multiple* traumatic events. The long-term impact of this exposure is severe and pervasive.

**Historical Trauma:** is a complex and collective trauma experienced over time and across generations by a group of people who share an identity, affiliation, or circumstance.



# 3 Realms of ACEs

ACEs Connection accelerates the global movement to prevent and heal adverse childhood experiences (ACEs), and supports communities to work collaboratively to solve our most intractable problems. Left unaddressed, toxic stress from ACEs harms children and families, organizations, systems and communities, and reduces the ability of individuals and entities to respond to stressful events with resiliency. The ACEs in these three realms intertwine throughout people's lives, and affect the viability of organizations, systems and communities.



## The Pair of ACEs

### Adverse Childhood Experiences

Maternal  
Depression

Physical &  
Emotional Neglect

Emotional &  
Sexual Abuse

Divorce

Substance  
Abuse

Mental Illness

Domestic Violence

Homelessness

Incarceration

### Adverse Community Environments

Poverty

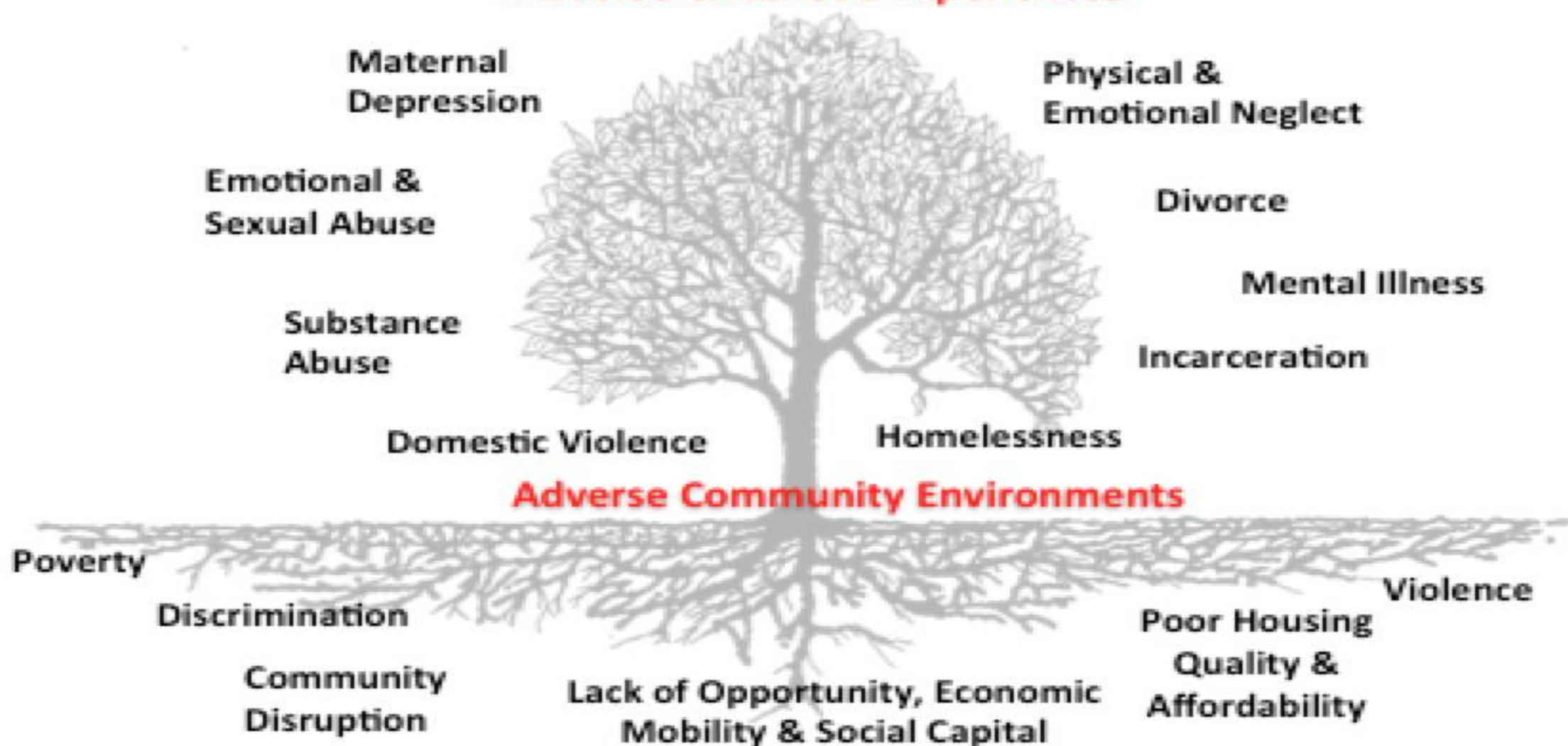
Discrimination

Community  
Disruption

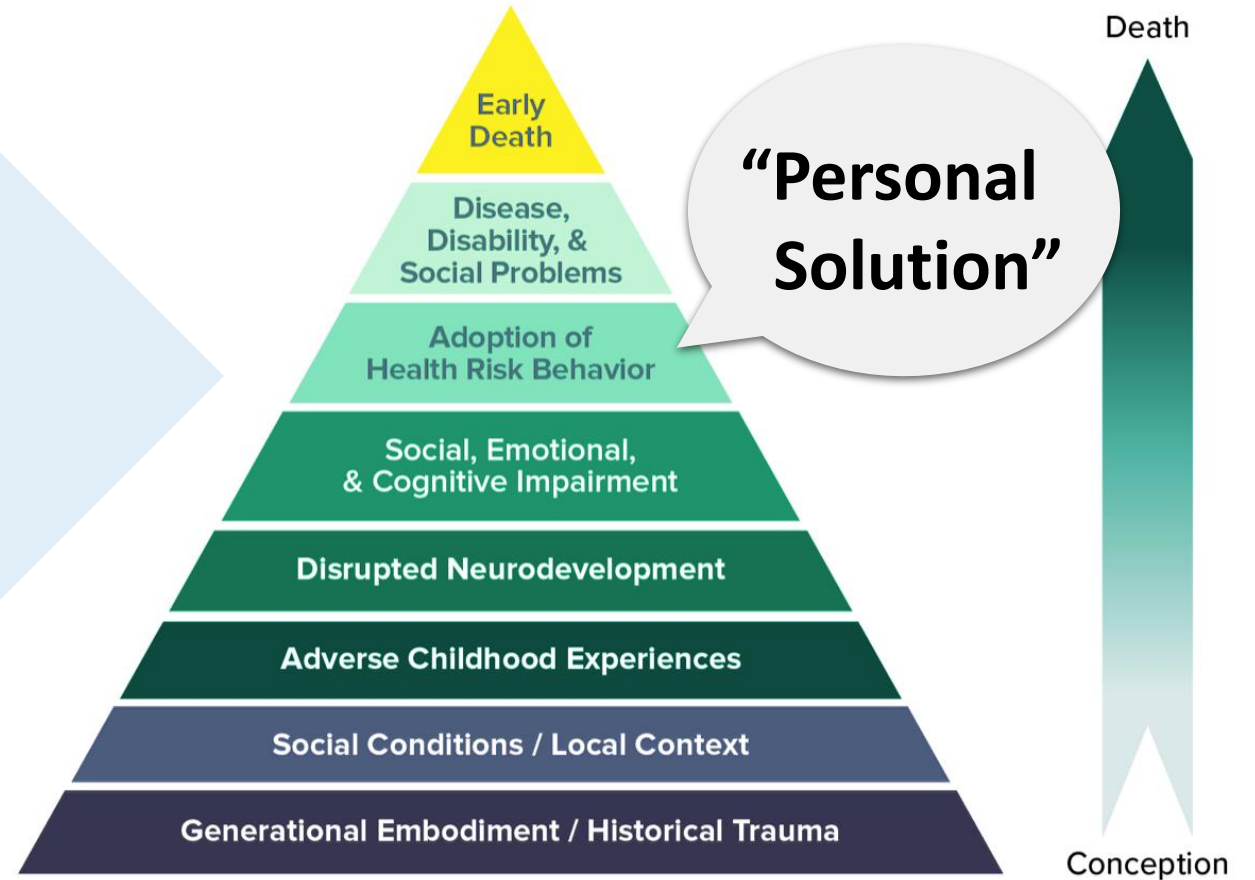
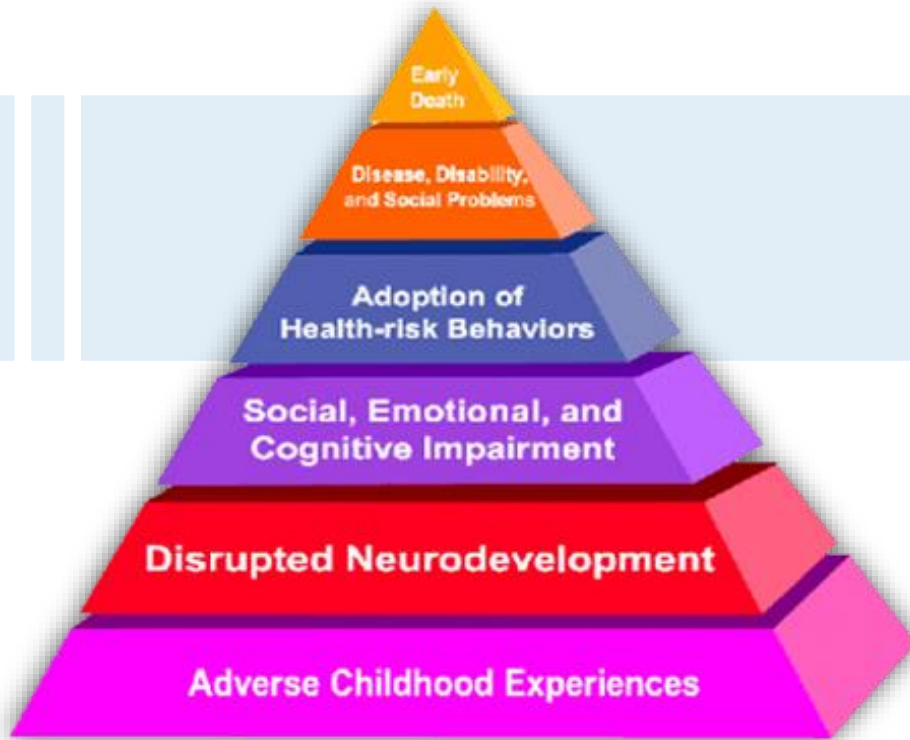
Lack of Opportunity, Economic  
Mobility & Social Capital

Poor Housing  
Quality &  
Affordability

Violence



# The Model has Expanded Since the Original Study



Mechanism by which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan

# ACE SCORE CALCULATOR

1. Did a parent or other adult in the household **often**: Swear at you, insult you, put you down, or humiliate you? **OR** Act in a way that made you afraid that you might be physically hurt?

Yes      No      If yes enter 1 \_\_\_\_\_

Finding Your ACE Score

Write you were growing up, during your first 18 years of life:

1. Did a parent or other adult in the household **often** or **very often**...  
Swear at you, insult you, put you down, or humiliate you?  
or  
Act in a way that made you afraid that you might be physically hurt?  
Yes No If yes enter 1 \_\_\_\_\_
2. Did a parent or other adult in the household **often** or **very often**...  
Push, grab, slap, or throw something at you?  
or  
Ever hit you so hard that you had marks or were injured?  
Yes No If yes enter 1 \_\_\_\_\_
3. Did an adult or person at least 5 years older than you **ever**...  
Touch or fondle you or have you touch their body in a sexual way?  
or  
Attempt or actually have oral, anal, or vaginal intercourse with you?  
Yes No If yes enter 1 \_\_\_\_\_
4. Did you **often** or **very often** feel that ...  
No one in your family loved you or thought you were important or special?  
or  
Your family didn't look out for each other, feel close to each other, or support each other?  
Yes No If yes enter 1 \_\_\_\_\_
5. Did you **often** or **very often** feel that ...  
You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you?  
or  
Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?  
Yes No If yes enter 1 \_\_\_\_\_
6. Were your parents **ever** separated or divorced?  
Yes No If yes enter 1 \_\_\_\_\_
7. Was your mother or stepmother:  
**Often** or **very often** pushed, grabbed, slapped, or had something thrown at her?  
or  
**Sometimes, often, or very often** kicked, bitten, hit with a fist, or hit with something hard?  
or  
Ever repeatedly hit at least a few minutes or threatened with a gun or knife?  
Yes No If yes enter 1 \_\_\_\_\_
8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?  
Yes No If yes enter 1 \_\_\_\_\_
9. Was a household member depressed or mentally ill, or did a household member attempt suicide?  
Yes No If yes enter 1 \_\_\_\_\_
10. Did a household member go to prison?  
Yes No If yes enter 1 \_\_\_\_\_

Now add up your "Yes" answers: \_\_\_\_\_ This is your ACE Score.

062406RA4CR

## CALCULATING YOUR ACE SCORE

2. Did a parent or other adult in the household **often**: push, grab, slap, or throw something at you? **OR** Ever hit you so hard that you had marks or were injured?

Yes No

If yes enter 1 \_\_\_\_\_



## CALCULATING YOUR ACE SCORE

3. Did an adult or person at least 5 years older than you **ever** touch or fondle you or have you touch their body in a sexual way? **OR** Try to or actually have oral, anal, or vaginal sex with you?

Yes    No                    If yes enter 1 \_\_\_\_\_

4. Did you **often** feel that no one in your family loved you or thought you were important or special? **OR** Your family didn't look out for each other, feel close to each other, or support each other?

Yes    No                    If yes enter 1 \_\_\_\_\_

## CALCULATING YOUR ACE SCORE

5. Did you often feel that you didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? OR Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?

Yes No If yes enter 1 \_\_\_\_\_

6. Were your parents ever separated or divorced?

Yes No If yes enter 1 \_\_\_\_\_

## CALCULATING YOUR ACE SCORE

7. Was your mother or stepmother often pushed, grabbed, slapped, or had something thrown at her? OR Sometimes or often kicked, bitten, hit with a fist, or hit with something hard? OR Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?

Yes No

If yes enter 1 \_\_\_\_\_

8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?

Yes No

If yes enter 1 \_\_\_\_\_

## CALCULATING YOUR ACE SCORE

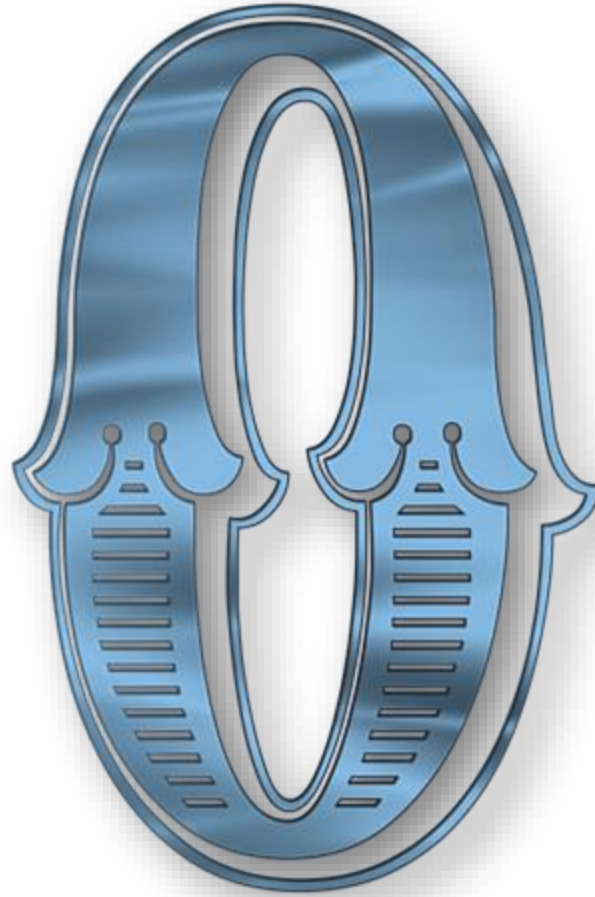
9. Was a household member depressed or mentally ill or did a household member attempt suicide?

Yes No If yes enter 1 \_\_\_\_\_

10. Was a household member ever incarcerated?

Yes No If yes enter 1 \_\_\_\_\_

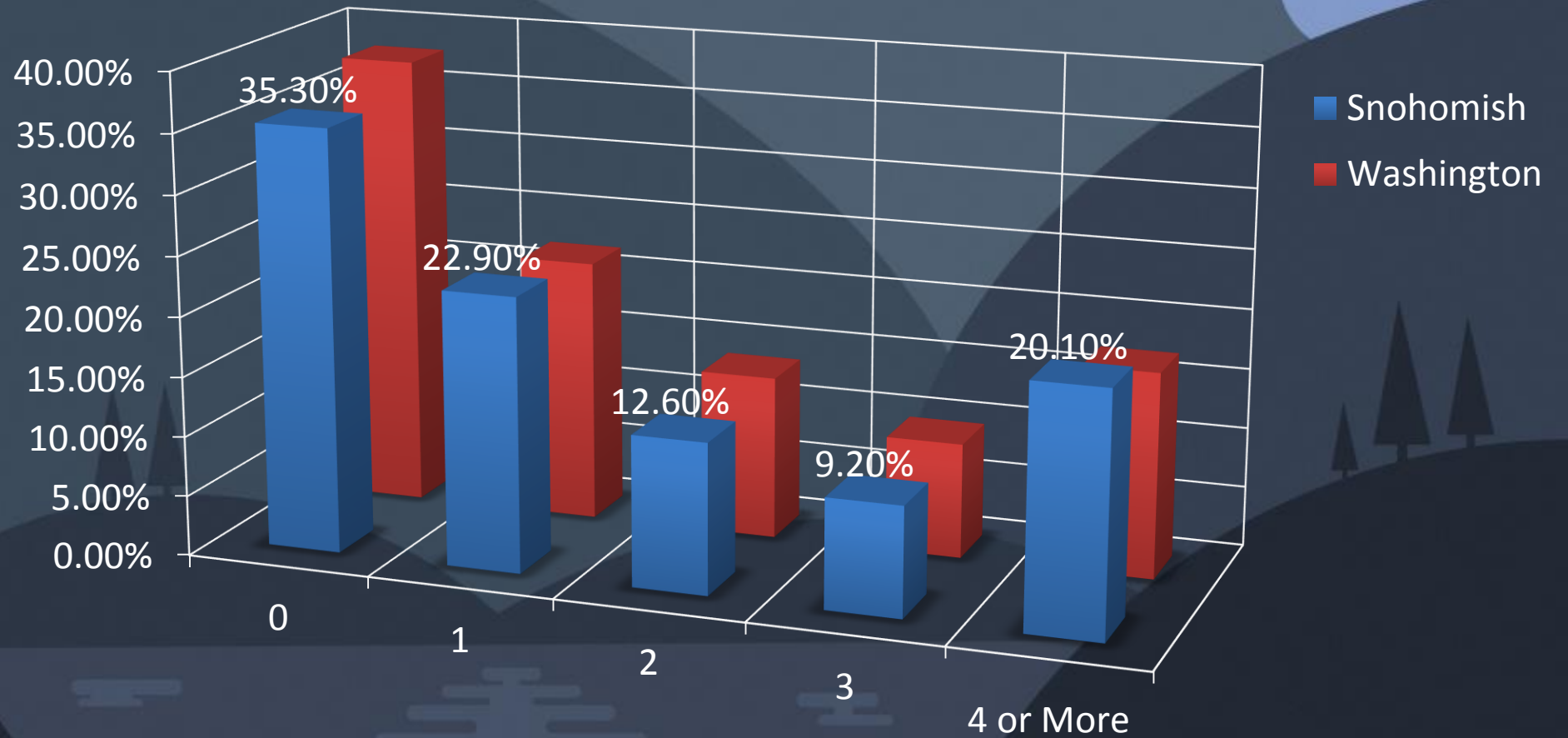
**Did Anyone Score Zero**



# POLL: What is Your ACE SCORE?



# ACES IN SNOHOMISH COUNTY



# Five Minute Break

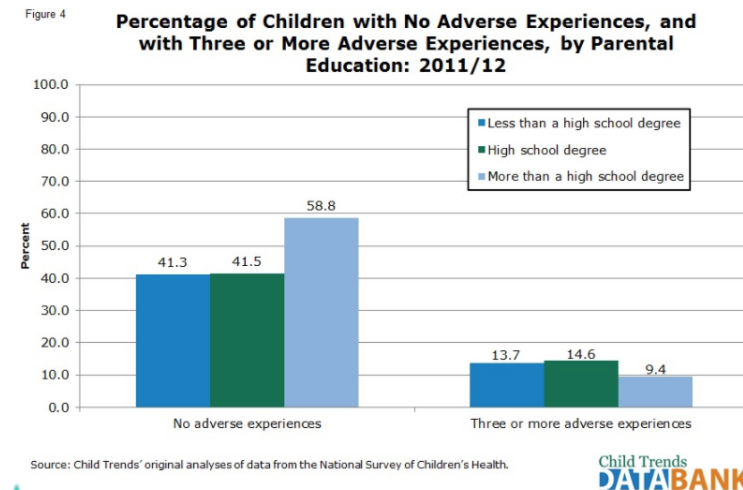
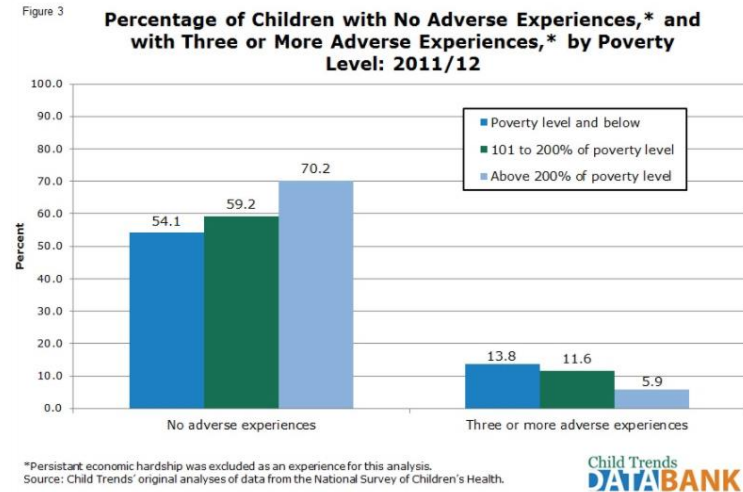




# ACES & Poverty are Linked

If you serve youth, know that poor and near poor children are **more likely to be exposed to ACES** if their parents lack a high school education.

They are also **more than twice as likely** to have three or more categories of trauma exposure compared to children not impacted by poverty.



# Do You Really Know Maja?



[https://www.youtube.com/watch?v=E\\_zaoQFWeLs](https://www.youtube.com/watch?v=E_zaoQFWeLs)

# Annotate: What is Maja's ACE SCORE?

0

1-3

4+

# Annotate: Client of Concern

**Do you suspect your client of concern has been exposed to ACEs?**

**No**

**Yes**



# ACE STUDY FINDINGS

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## COMMON

ACEs are strong indicators of what happens in school and later in life.

Category exposure determines outcomes

## WELL CONCEALED



# How Common are ACEs?

Unfortunately, ACEs are so common the CDC has deemed them the #1 chronic health epidemic

Chronic Health Epidemic  
**#1**

**45%**

The 2016 National Survey of Children's Health (NSCH) revealed that 45% of U.S. children have experienced at least one ACE

Almost **two-thirds** of participants of the original ACE study reported being exposed to at least one ACE

Women were more likely to report:

**64%**

The most common ACEs nationally reported in this 2016 study were:

13.1%

Emotional Abuse

24.7%

Sexual Abuse

23.3%

Mental Illness



Economic Hardship



Divorce or Separation of a Parent or Guardian

# The Brain Science

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**A person's environment** and experience shapes their behavior and health.

**Our brain** is designed to prioritize survival.

**Hormones** like Cortisol are released when our “Fight, Flight, or Freeze” response is triggered.



# Toxic Stress

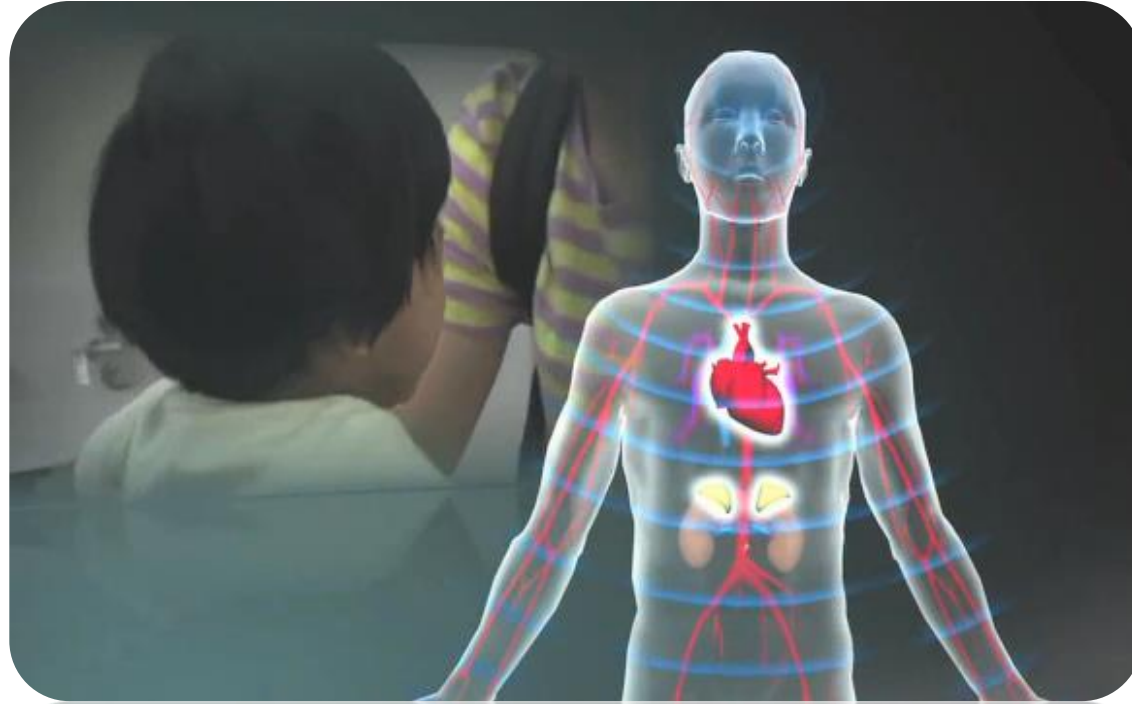
**Prolonged exposure** to Cortisol and other stress hormones is toxic, and makes permanent changes to the brain.

This means you may encounter clients who are **perfectly adapted to survive** in their home environment, but who **cannot turn-off** their behavioral and stress response adaptations in your organization, community or other “normal” situations.





# Our Stress Response System



<https://www.youtube.com/watch?v=rVwFkcOZHJw&t=2s>

# Not All Stress is Bad

## Positive Stress

Common stressful events that produce a mild stress response within the context of supportive families, schools and communities.

## Tolerable Stress

Living in a high stress environment, but buffered by a supportive family and community system.

## Toxic Stress

Continuous activation of the stress response system without a protective buffer, causing lasting damage and impairing parts of the brain responsible for learning, concentration and self-control.

# Do You Recognize Signs of Traumatic Brain Development?

**Hypervigilance** – On edge, always scanning for threats.

**Display of ADHD-like symptoms**, including an inability to stay on task or follow directions, but meds don't work.

**Difficulty** identifying feelings or communicating needs.

**Early onset** of sexualized behaviors and activity.

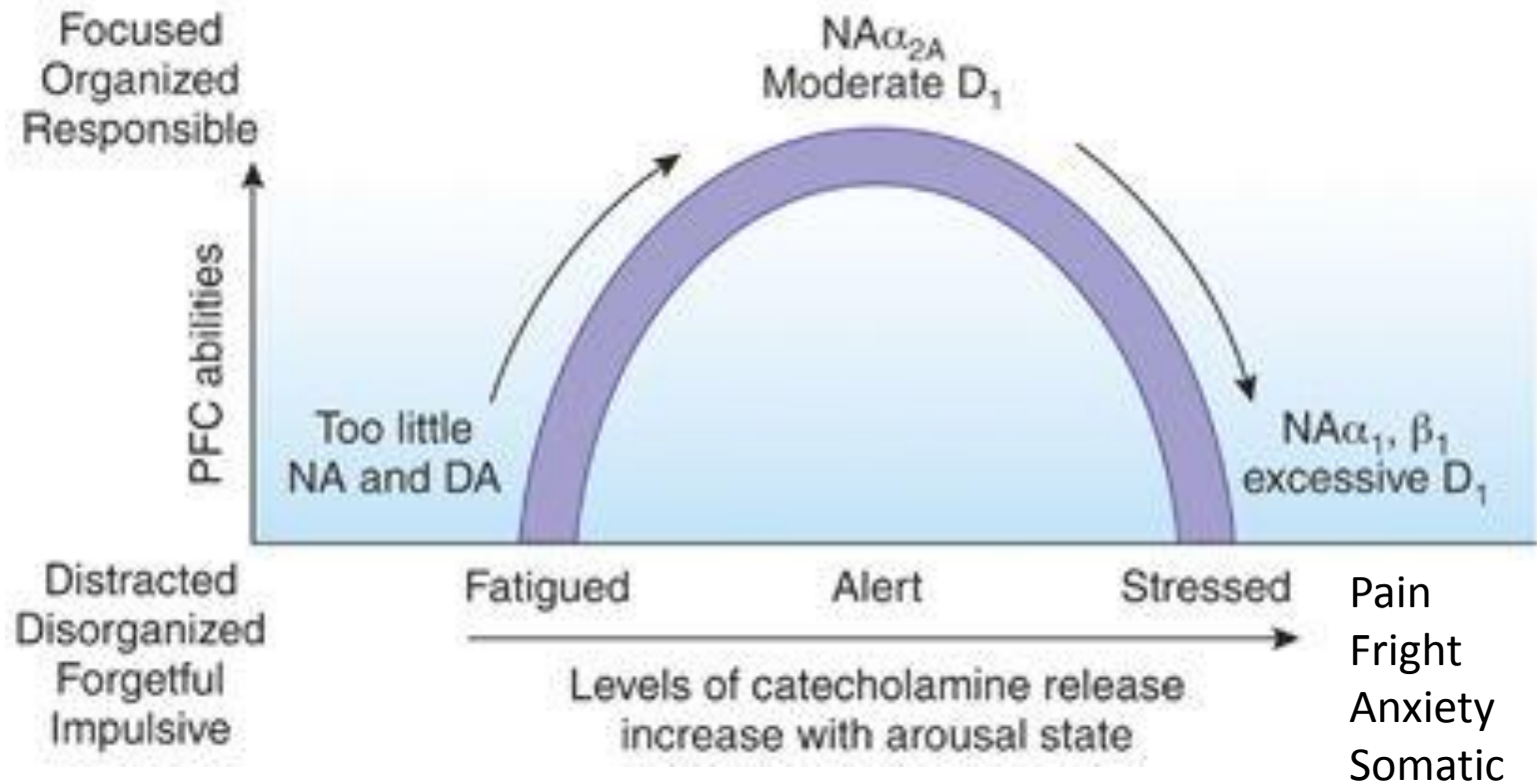
**More impulsive**, aggressive and disruptive behaviors, including those leading to suspension, expulsion and arrest.

**Difficulty** with transitions.

# CATECHOLAMINE PRODUCTION IMPACTS ADHD SYMPTOMS

Low catecholamine production results in distracted and impulsive behaviors.

**High catecholamine production impact somatic symptoms**



# MORE TRAUMA SYMPTOMS

Bullying & Teasing

Sadness & Crying

Anger & Aggression

School Avoidance

Physical Complaints

Trauma

Risk Taking – Substance Abuse

Withdrawal

Irritability

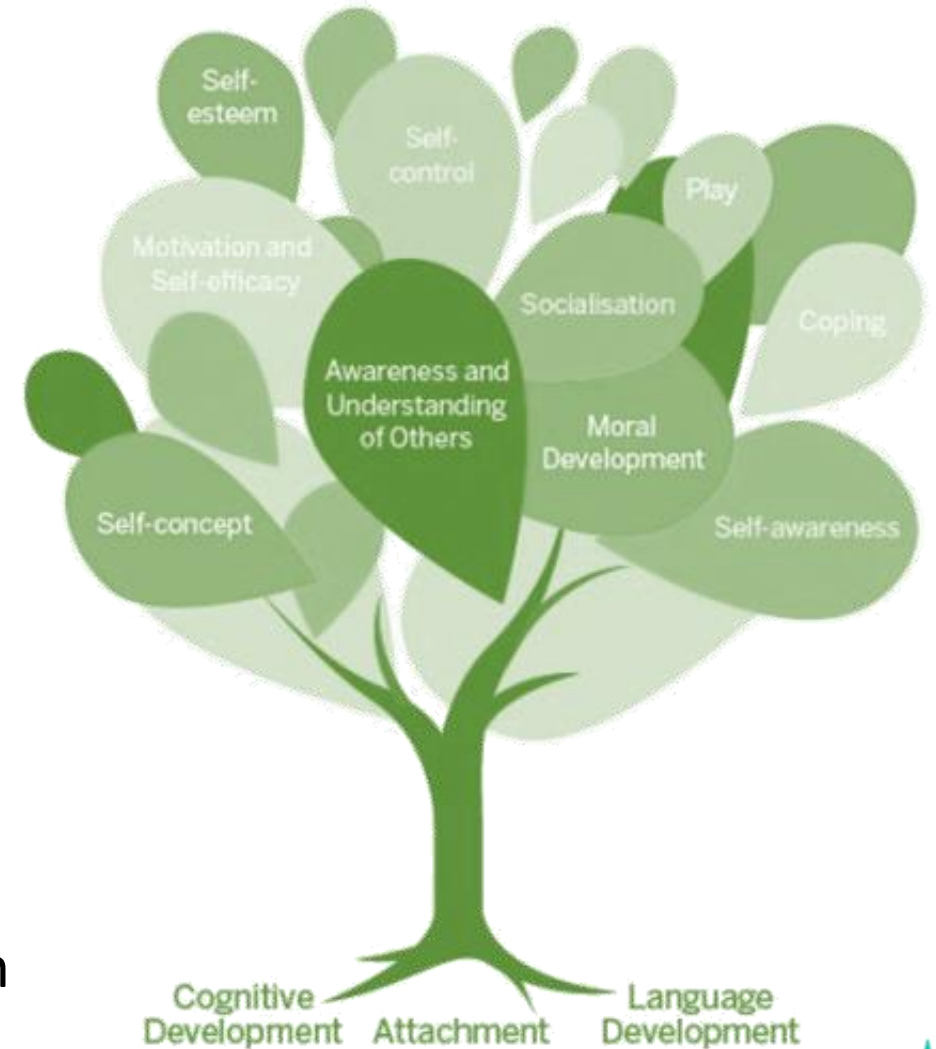
Self-Harm

Concentration Problems

Running

# Trauma Impacts Self-Concept

- Hopelessness
- Body image
- Shame, guilt, self-blame
- Do not feel safe in this world
- Difficulty developing healthy relationships
- Dissociation
- Hard time with boundaries
- Hesitant to trust people for support or attention



# Physiological Impacts

## Trauma Induced Physiological Outcomes

Difficulty concentrating and negative thoughts	Headaches, muscle tension, stomach aches and other somatic symptoms
Impaired memory	Weakened immune system
Higher blood pressure	Decreased bone density and muscle tissue
Hyperglycemia (fatigue, excessive thirst/urination)	Slower healing
Coordination problems	Development of health risk behaviors

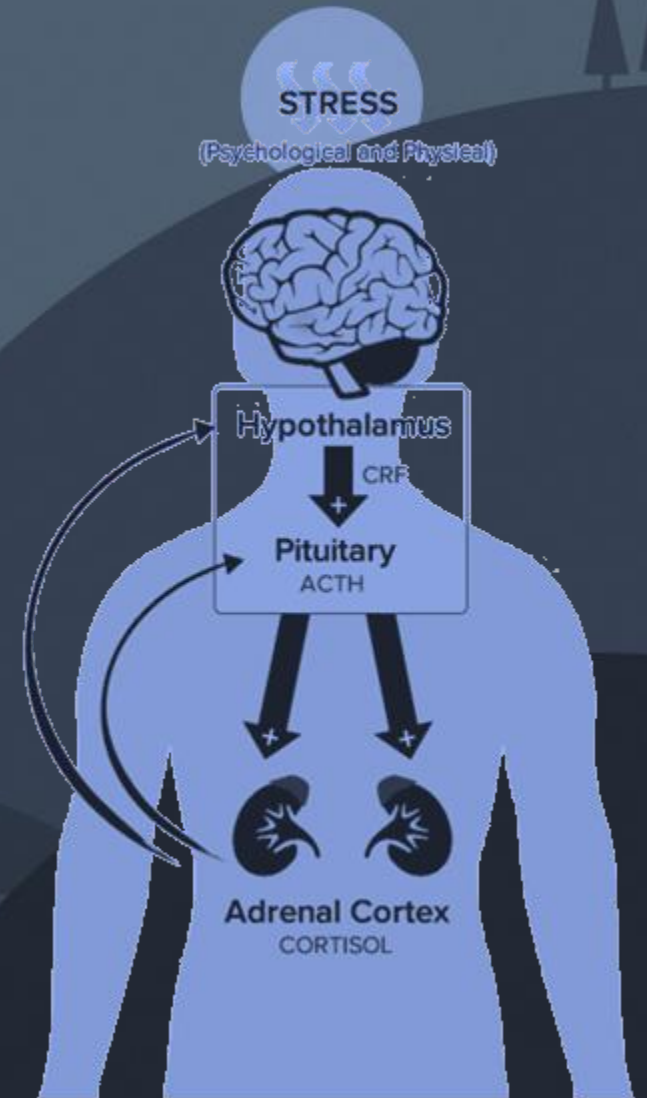


# CORTISOL AWAKENING RESPONSE

People exposed to high levels of conflict, abuse or other dysfunction may develop dysregulated HPA Axis reactivity, leading to increases in health and social, emotional and behavioral problems.

**Cortisol Awakening Response (CAR)** – A burst of the stress hormone Cortisol at each morning wakeup that orients us to our place in space and time in order to prepare us for our day.

Our CAR brings us to full alertness, activates our immune system, helps us to recall memories that help us to anticipate our day (like a project being due or an upcoming test), and increases energy availability for coping with demands.





# BLUNTED STRESS RESPONSE

**Blunted Stress Response** – Occurs when constant activation of the stress response system creates a homeostatic reaction in the HPA Axis – a forced dampening of stress hormone production.

A dysregulated CAR system diminishes executive function and is related to these issues in your classroom:

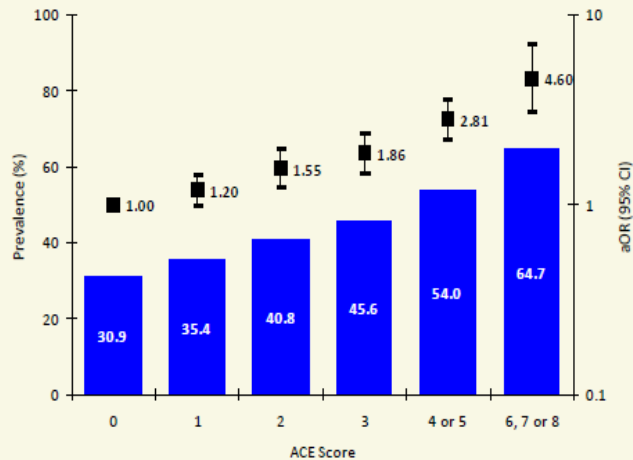
Memory Distortion	Persistent Aggression	Diminished Coping	Callousness
Depression	Hyporeactivity	Sleep/Fatigue Problems	Less adaptive to change
Anxiety/Pervasive Worry	Less motivation/engagement	Blunted response to reward	Over-response to social environment

Researchers have linked advanced stress management skills to improvements CAR functioning.

# ACES IMPACT BEHAVIORAL HEALTH

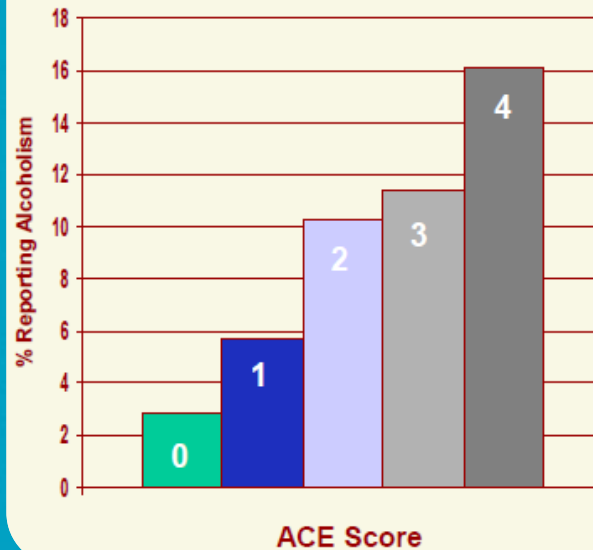
## SMOKING

Age-adjusted prevalence and multivariable-adjusted relative odds of smoking (ever) by ACE score



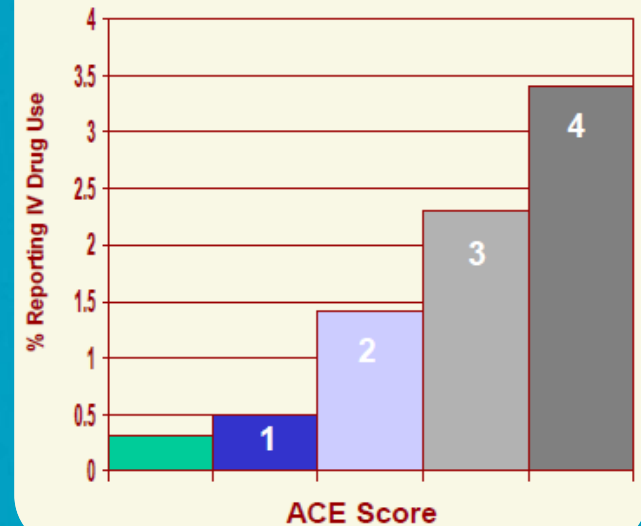
46% increase from baseline.

## Adult Alcoholism



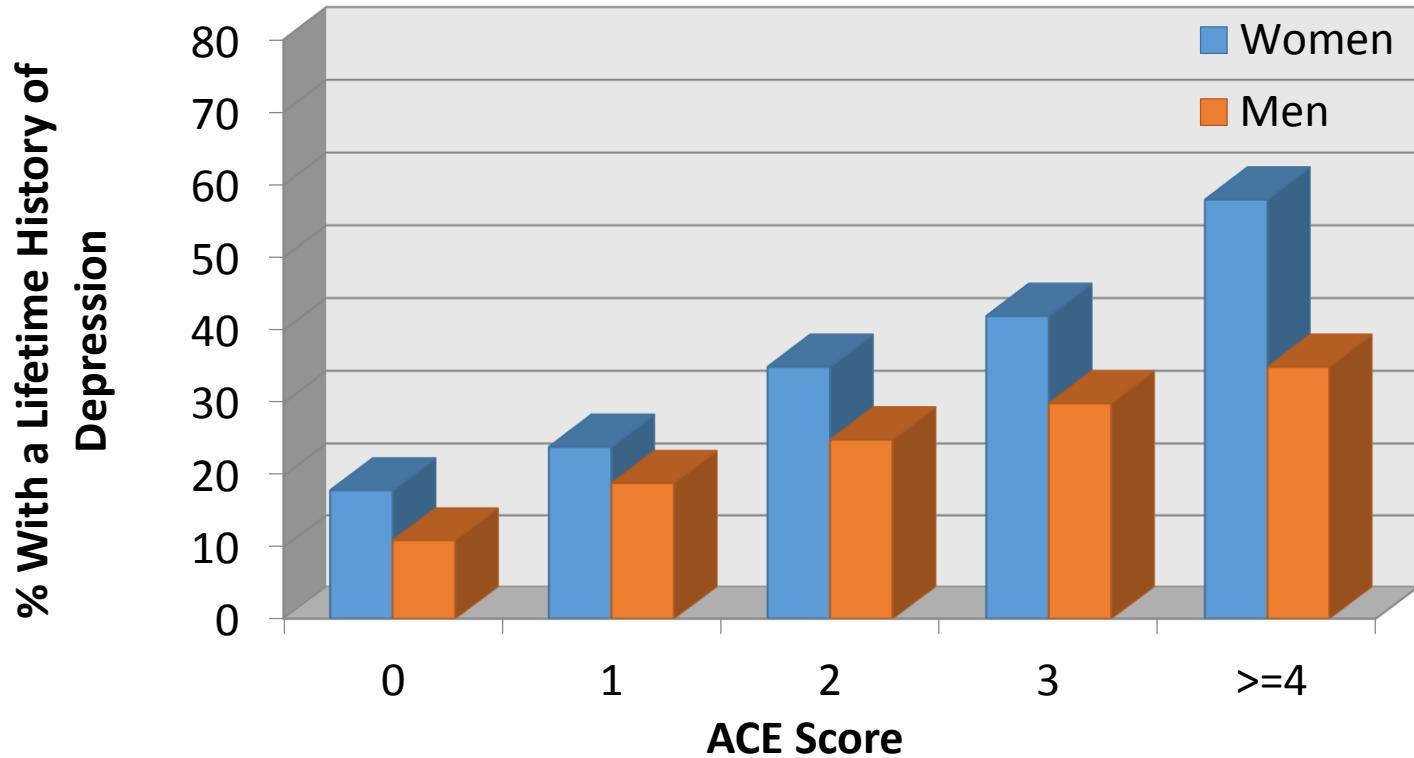
440% increase from baseline.

## Intravenous Drug Use



820% increase from baseline.

# ACES IMPACT MENTAL HEALTH

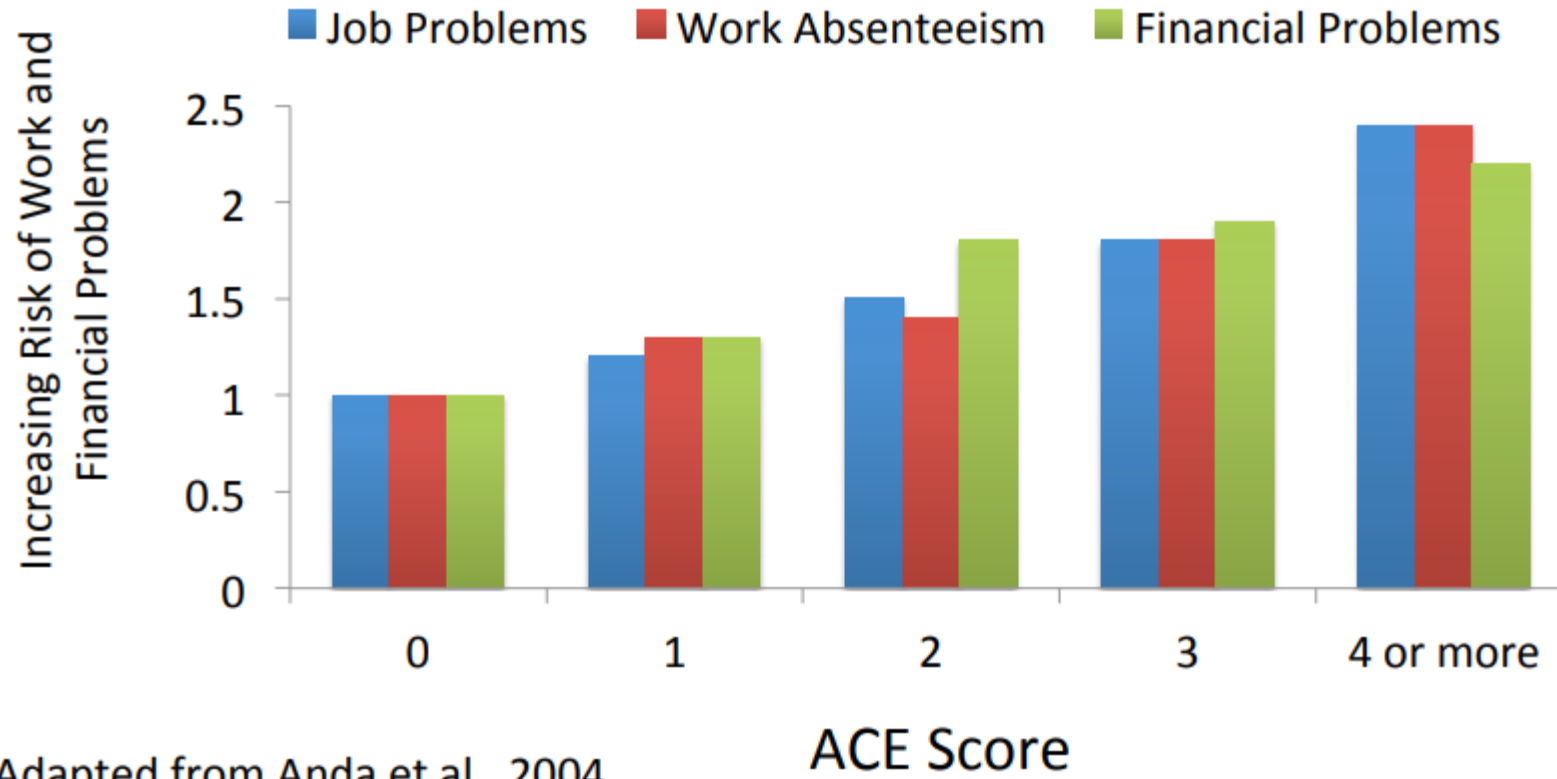


**220% increase from baseline.**



**2,275% increase from baseline.**

# ACES IMPACT EMPLOYMENT



Adapted from Anda et al., 2004

# ACES LEAD TO THE 10 MOST COMMON CAUSES OF EARLY DEATH

alcoholism

violence

physical inactivity

illicit drug use

**severe obesity**

injected drug use

suicide attempts

smoking

depression

more than 30 sexual partners



# REFRAMING OUR POINT OF VIEW

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**With an ACE score of 0**, the majority of adults have few, if any, risk factors for the most common diseases leading to early death.

**With an ACE score of 4 or more**, the majority of adults have multiple risk factors for these diseases or the diseases themselves.

*Much of what we see as problem behaviors should actually be viewed as a **personal solution** to an unrecognized prior adversity.*



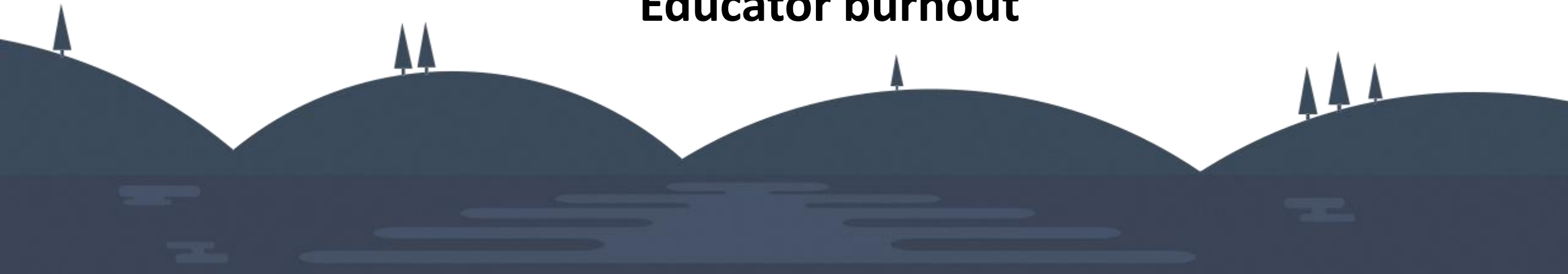
# ACES IMPACT SNOHOMISH COUNTY SCHOOLS

**Special education needs**

**Grade repetition**

**Problems at school**

**Educator burnout**



## Meet Malory

Mallory is in 8<sup>th</sup> grade at Centennial Middle School.

Her counselor knows Mallory's mother physically abused her in the past. As a result, **Mallory's *known* ACE Score is "1."**

Keep in mind - ACEs travel in clusters: Among people exposed to physical abuse, **84% report exposure to at least 2 additional ACEs.**





# MALLORY'S AGGRESSION

Mallory is frequently sent to the office for aggressive and defiant behavior. Three months ago, she was suspended again for fighting in the cafeteria.

- Students like Mallory are **nearly twice as likely (1.9x)** to report getting into a **physical fight** within the past 12 months.
- They are **4.2x more likely** to be in **six or more physical fights**.



# BULLYING & SAFETY AT SCHOOL

Mallory has trouble making lasting friendships and is frequently the target of bullying behavior.

8<sup>th</sup> graders like Mallory are:

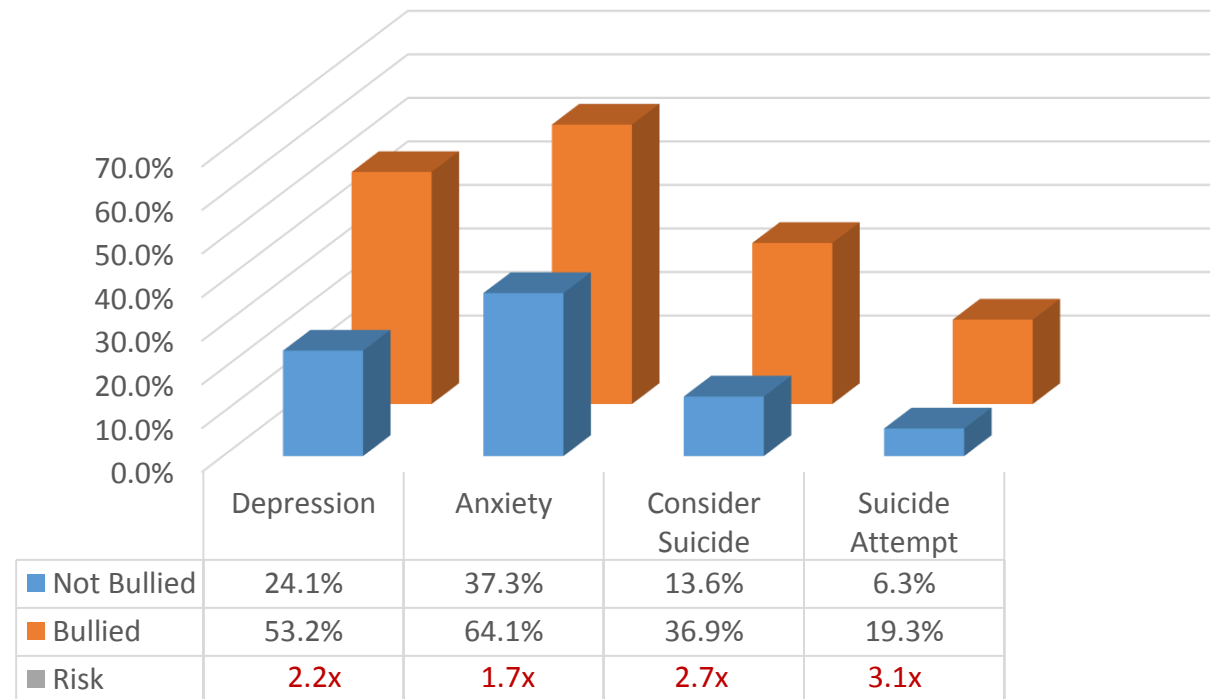
- **Twice as likely** (2.0x) to report being the *victims* of bullying.
- **3.0x as likely** to report missing days of school because they feel unsafe.

# BEYOND ACES - BULLYING

Emerging evidence suggests the negative impacts of childhood bullying on long-term adult health and wellness outcomes are **more severe than the impacts of child abuse and neglect.**

Bullying Impacts 8<sup>th</sup> Grade Mental Health

Source: Washington State Health Youth Survey 2018



# MALLORY'S MENTAL HEALTH

**Mallory seems pretty disengaged in class and always looks tired. She can't remember facts or directions from 10 minutes ago.**

- Students who report being physically abused by an adult are **more than twice as likely** (2.2x) to report being **depressed** on the most recent HYS.
- They are also **nearly three times as likely** (2.8x) to report **contemplating suicide**.
- They are **more than three times as likely** (3.3x) to have made an actual **attempt to die by suicide** within the last year.

# MALLORY'S PERSONAL SOLUTIONS

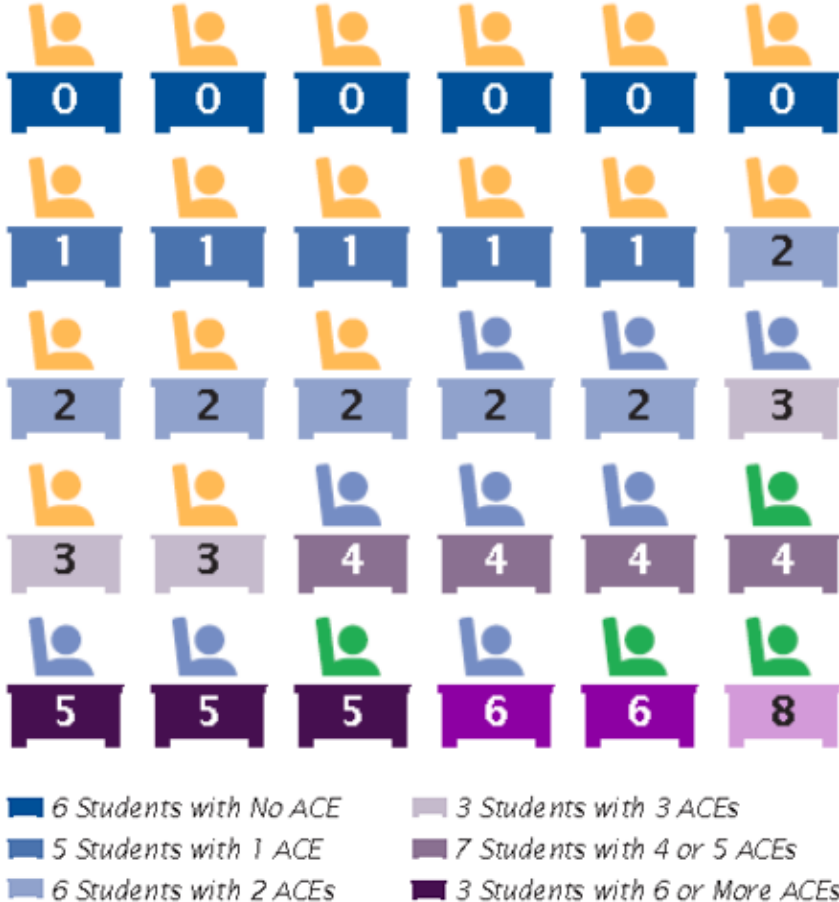
Mallory was caught bringing a flask of alcohol to school in 7<sup>th</sup> grade. She was suspended and hasn't really engaged with any helping adults since then.

- 8<sup>th</sup> Graders like Mallory are **3.4x more likely** to report **current alcohol or marijuana use**.
- They are **8.6x more likely** to indicate **current prescription pain killer use**.



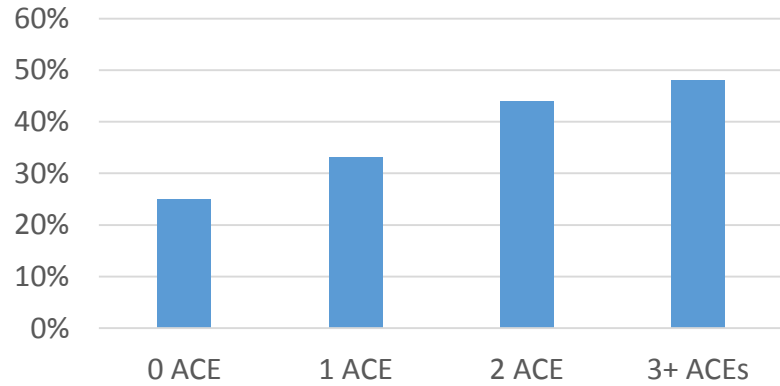
# ACES in Every Classroom

More than 1 in 5 8<sup>th</sup> graders in Snohomish County Schools indicate they have been intentionally hurt by an adult on the most recent Healthy Youth Survey.

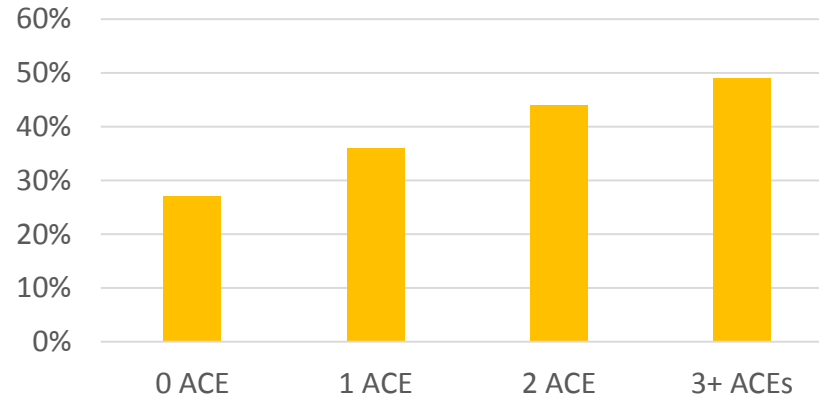


# ACE IMPACTS RISK FACTORS FOR DROP OUT

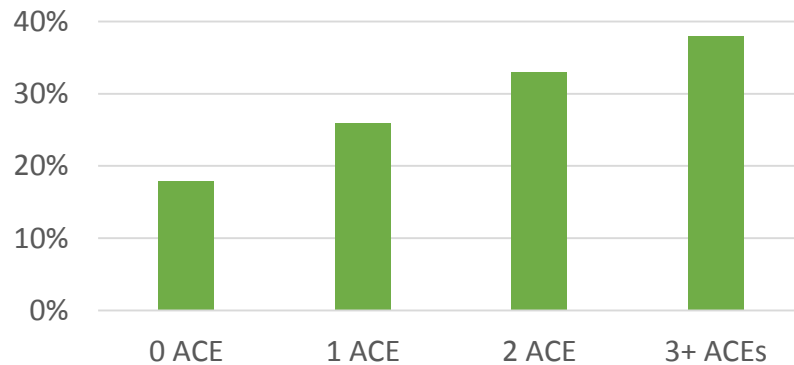
## Low School Engagement



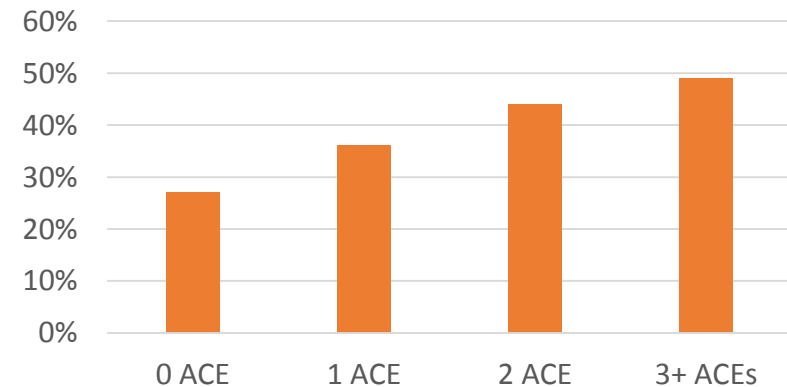
## Contacted Home Due to Problems



## Highly Externalizing Behavior

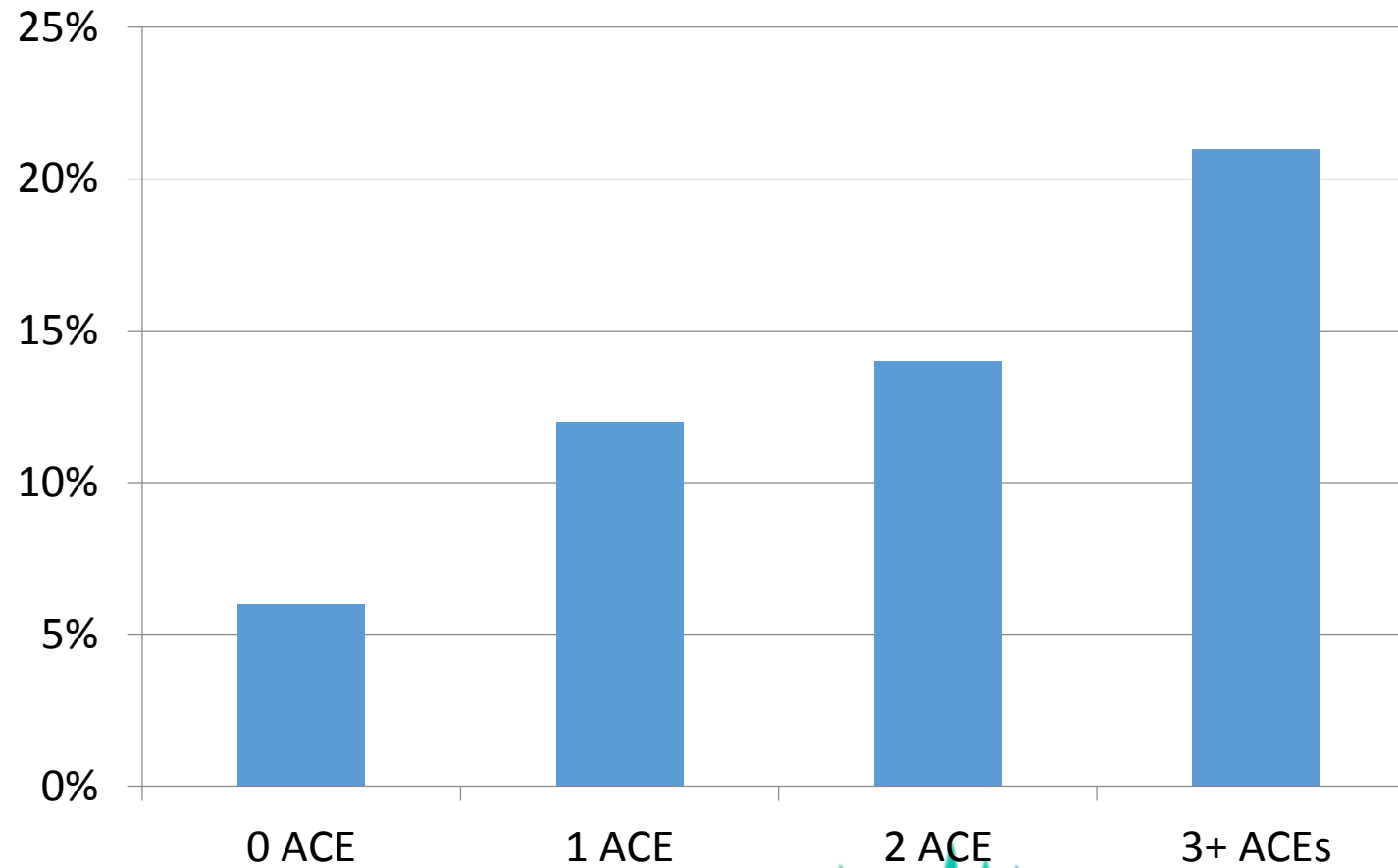


## Does Not Finish Tasks Started



# ACES IMPACTS RISK FACTORS FOR DROP OUT

## Grade Repetition

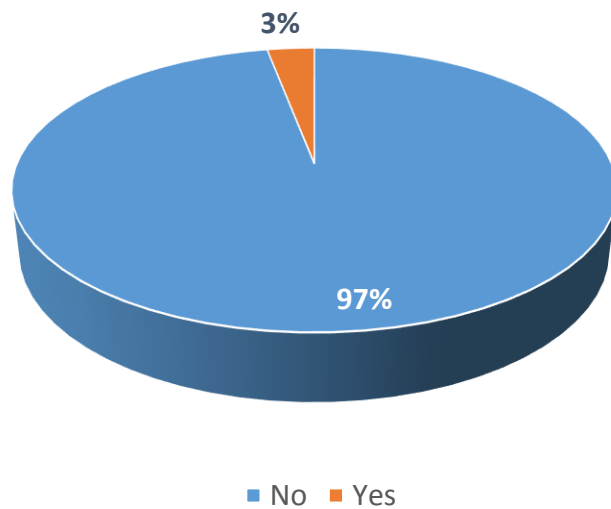




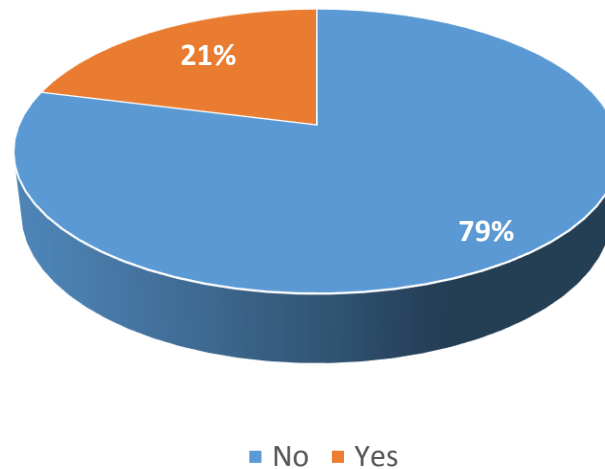
# ACES IMPACT SCHOOL COSTS

## NEED FOR ACADEMIC & BEHAVIORAL INTERVENTIONS

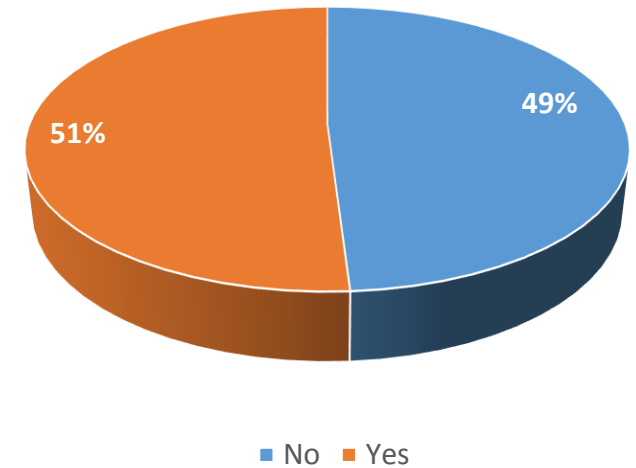
### Zero ACEs



### 1-3 ACEs



### 4+ ACEs



# CLIENT OF CONCERN – 10 Minute Breakout Session

Think about a client for whom you have concern. Write down the following:

1. What worries do you have for this client?
2. What challenging behaviors does this client exhibit, if any?
3. Do you suspect this client has exposure to ACES?
4. **All behavior has a function. If we consider this client's behavior as a *personal solution* instead of a problem, what purpose might the behavior serve? How does the behavior help them to get their needs met?**



# The link between Trauma & Health



Partial List of ACE Dose/Response Outcomes	
Alcoholism & alcohol abuse	School Drop-Out
Chronic obstructive pulmonary disease & ischemic heart disease	Significant Financial Problems
Depression and other MH issues	Sexually transmitted disease
Chronic Unemployment	Obesity
High risk sexual activity	Suicide attempts
Illicit drug use	Unintended pregnancy
Intimate partner violence	Early Death
Three or more marriages	Increased Emergency Room Use
Increased Pharmacy Use	Many more...

# Why Trauma Awareness Matters

To put it simply, childhood experiences are the most powerful determinants of who we become as adults.



# POPULATION ATTRIBUTABLE RISK

**PAR** = The difference in rate of a condition between an exposed population and an unexposed population.

In this case, it is a calculation used by the CDC to estimate the proportion of a health outcome caused by ACE.

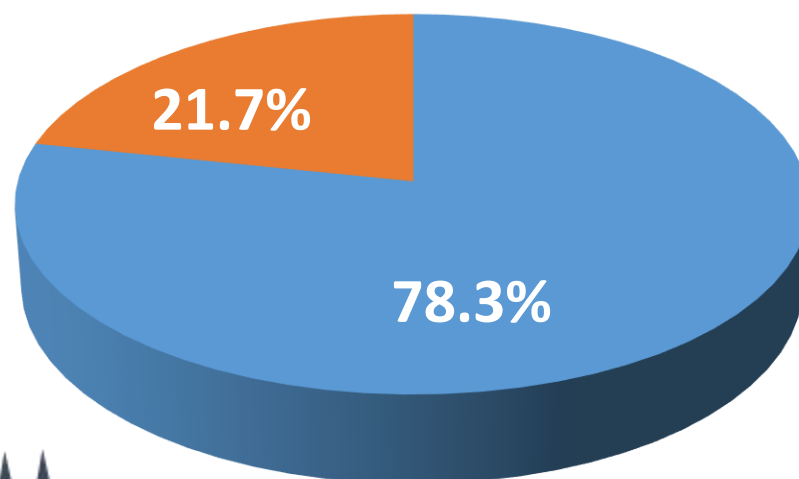
Takes into account:

- The increased risk due to each level of ACE
- The prevalence of the number of ACE categories

# POPULATION ATTRIBUTABLE RISK

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## Current Smoking

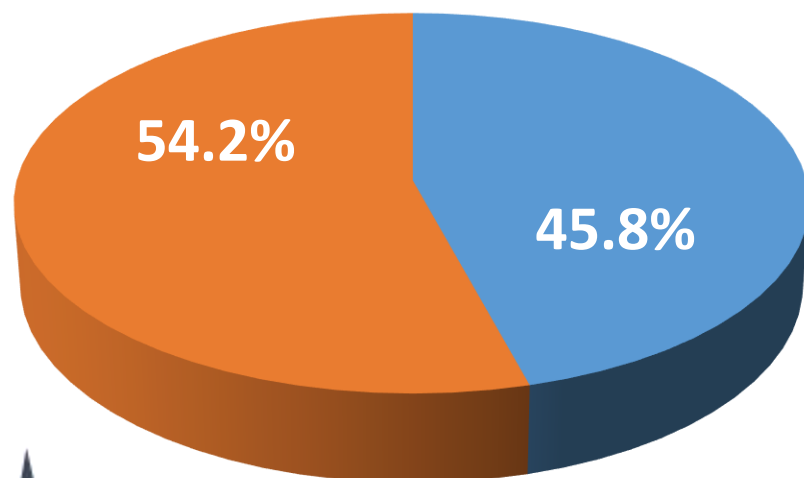


- Smoking Not Attributable to ACE
- Smoking Attributable to ACE

# POPULATION ATTRIBUTABLE RISK

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## Depression

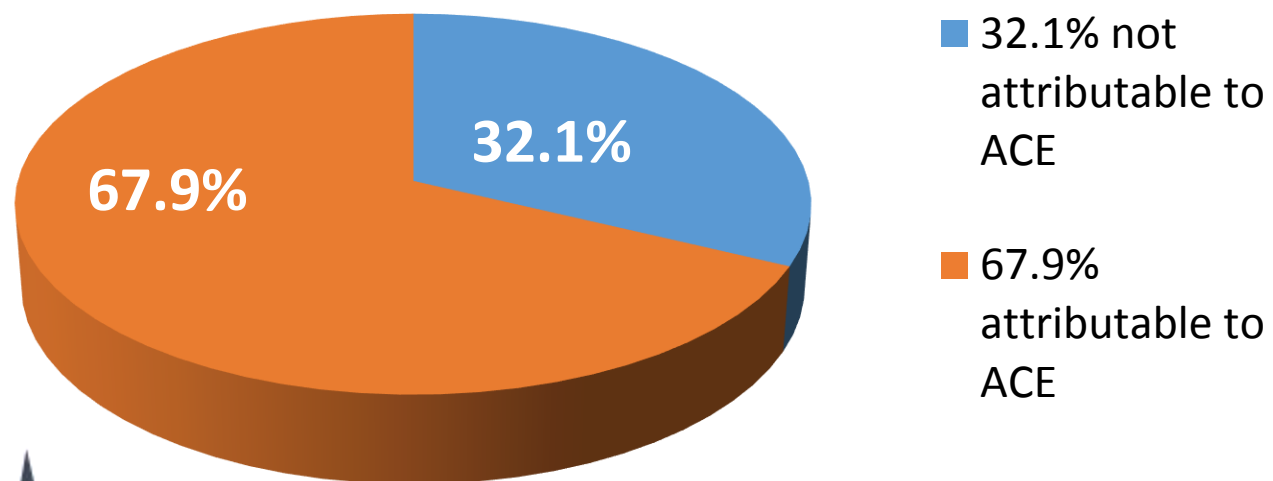


- Depression Not Attributable to Ace
- Depression Attributable to ACE

# POPULATION ATTRIBUTABLE RISK

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## Ever Using Illicit Drugs



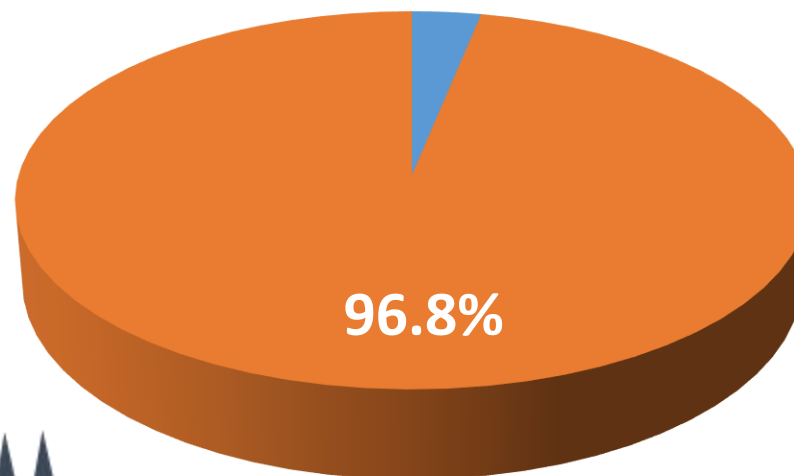


# POPULATION ATTRIBUTABLE RISK

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## Alcoholism

3.2%



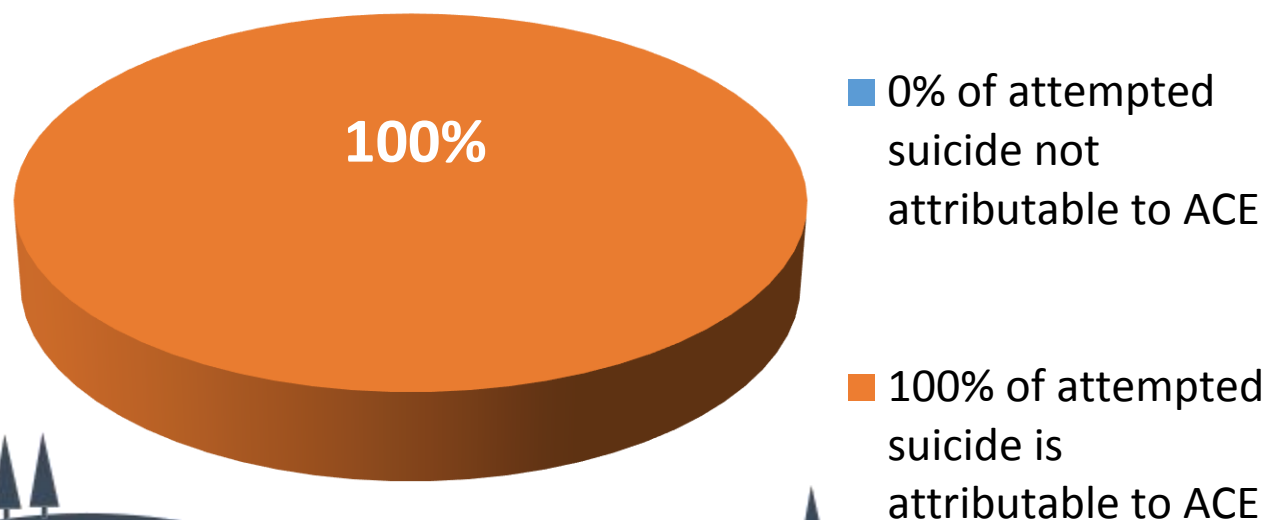
■ 3.2% of self-reported alcoholism not attributable to ACE

■ 96.8% of self-reported alcoholism attributable to ACE

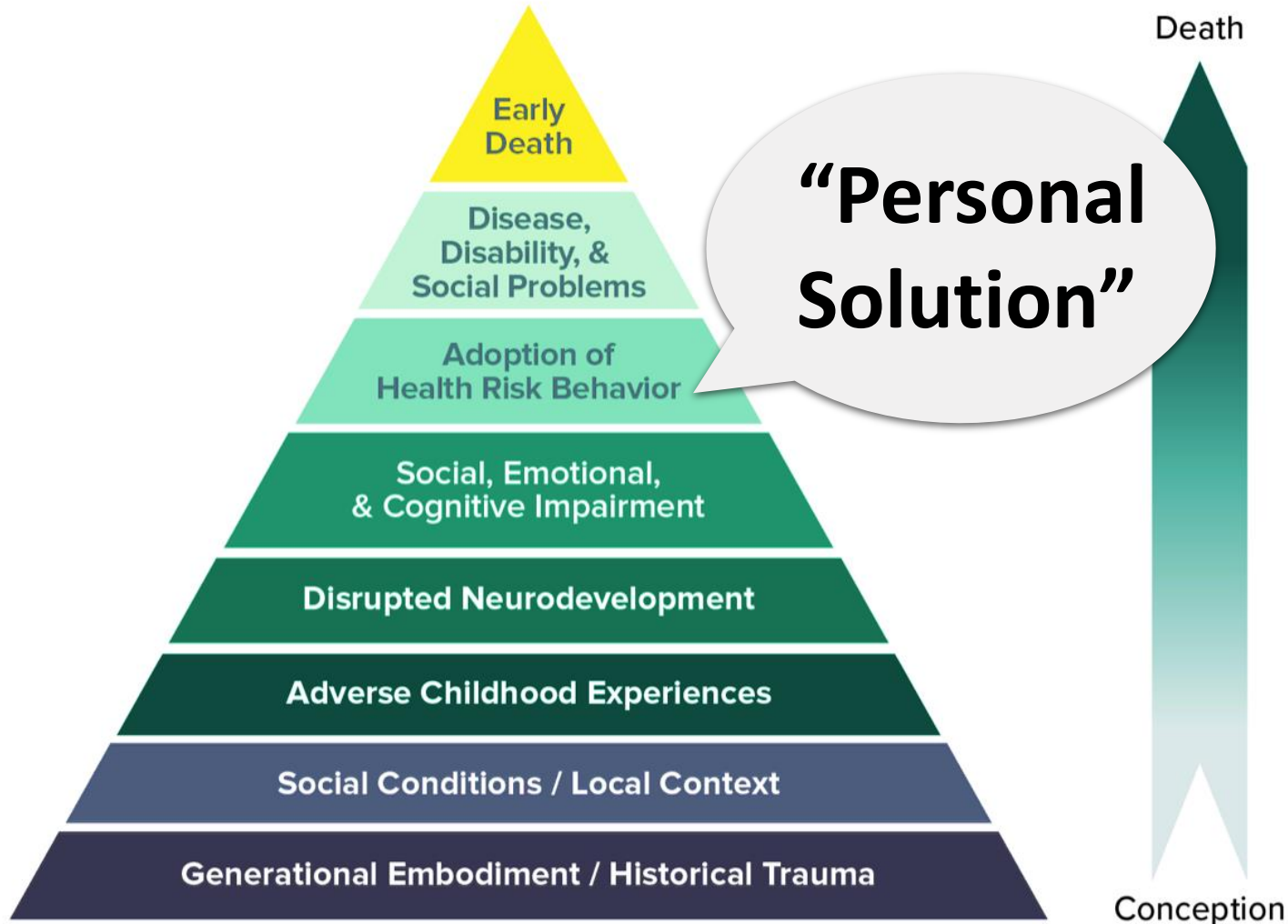
# POPULATION ATTRIBUTABLE RISK

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## Reporting Having Attempted Suicide



# The ACE Pyramid



Mechanism by which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan

*Without accounting for individual levels of resiliency,* this pyramid depicts how impacts to health and well-being can occur over a lifetime as a result of exposure to Adverse Childhood Experiences.

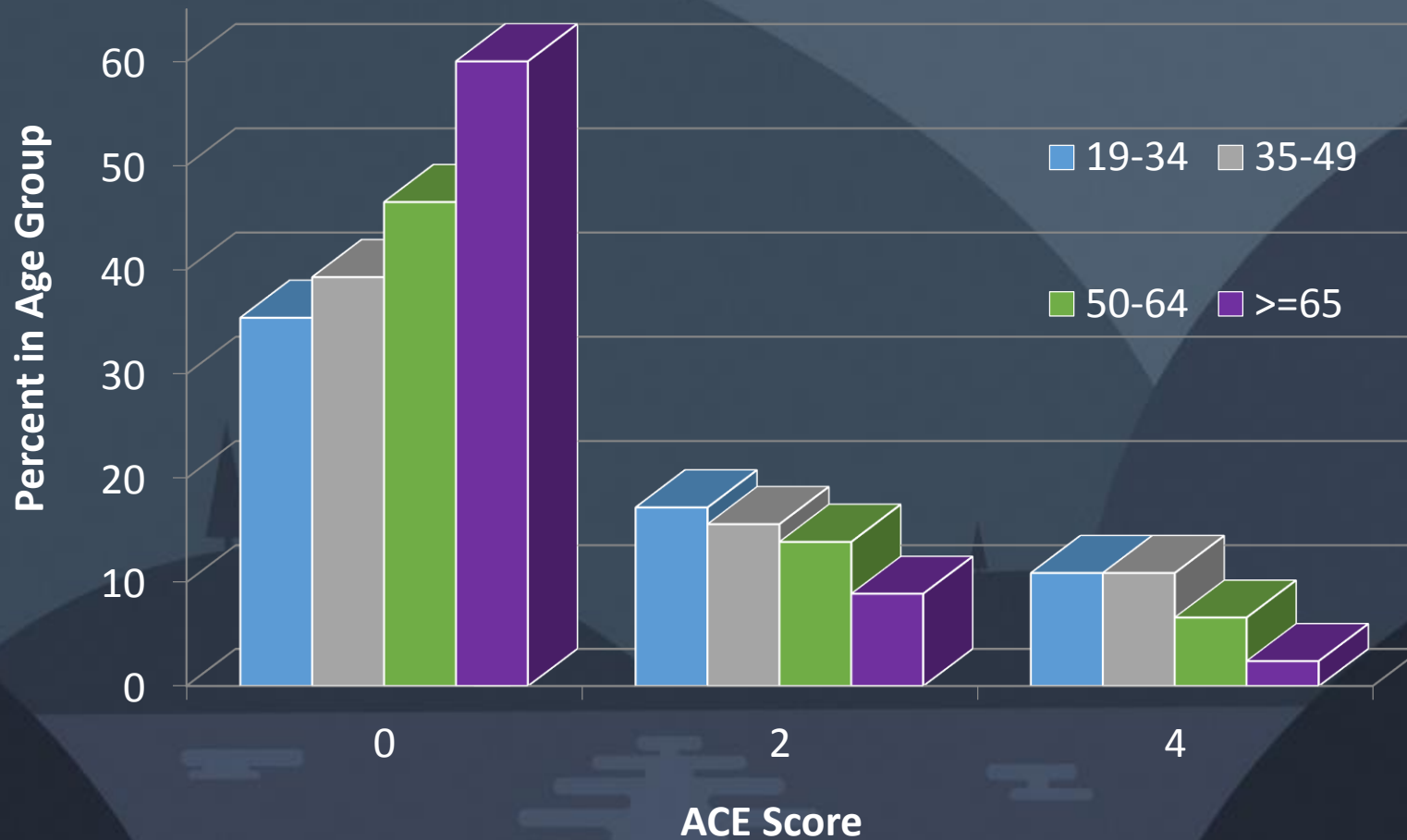
The ACE study found links between ACEs and adult health risks, often leading to chronic health conditions.

Those with **4 or more ACEs** were found to be:

- **12.2x** as likely to have attempted suicide
- **7.4x** as likely to consider themselves to be an alcoholic
- **4.7x** as likely to have ever used illicit drugs
- **4.6x** as likely to have had 2 or more weeks of depressed mood in the past year
- **3.2x** as likely to have had 50 or more intercourse partners, and
- **2.3x** as likely to smoke



# ACEs IMPACT MORTALITY

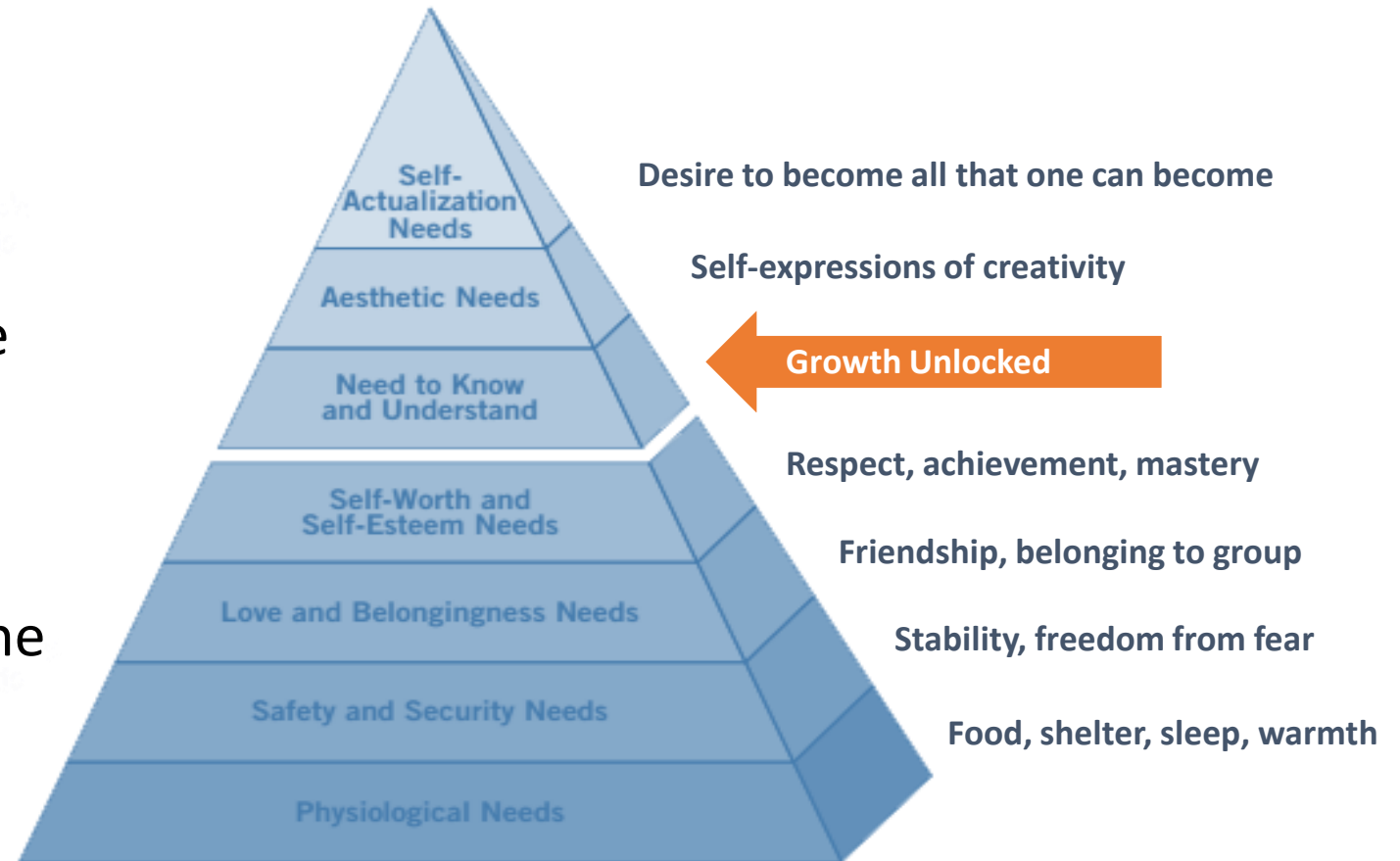


# MASLOW MATTERS!

Maslow identified a hierarchy of needs to explain individual motivation.

Your clients must meet needs at the lower levels of the pyramid before tackling higher levels.

How do you intentionally address the Deficiency Needs of your clients to unlock your organization's mission?



# You Matter!

Whether you like it or not, **most of you are on the ACEs frontline**. Without proper boundaries and self-care, you are likely to experience the **emotional residue** of working with trauma impacted clients.

- **Physical** – loss of sleep, not eating well, low energy
- **Emotional** – anxiety, sadness, numbness
- **Behavioral** – absent minded, losing things
- **Cognitive** – diminished concentration, loss of focus, hypervigilance
- **Interpersonal** – mistrust, withdrawal
- **Spiritual** – workplace frustration, feeling lack of support, not satisfied
- **Among social workers with only indirect exposure to trauma, the rate of PTSD is twice as high compared to the general population.**



## Personal Impact – Compassion Fatigue

We experience compassion fatigue – a **profound emotional and physical erosion** – when we are unable to refuel and regenerate ourselves. This is when our empathy shuts down.

- **Wishing** a client would just get over it (“Suck it up.”).
- **Blaming** clients for their problems.
- **Using anger** or sarcasm when trauma symptoms manifest.
- **Lacking Empathy** or fearing what the client will start to talk about next.
- **Ignoring** clear signs of trauma or avoiding the client altogether.

# Self-Care is Client Care!

Taking care of yourself should be enjoyable. If it feels like a chore, try something else!

## 2 minutes

- Breathe
- Stretch
- Daydream
- Take your stress temperature
- Acknowledge an accomplishment
- Say no
- Compliment yourself
- Share a favorite joke

## 5 minutes

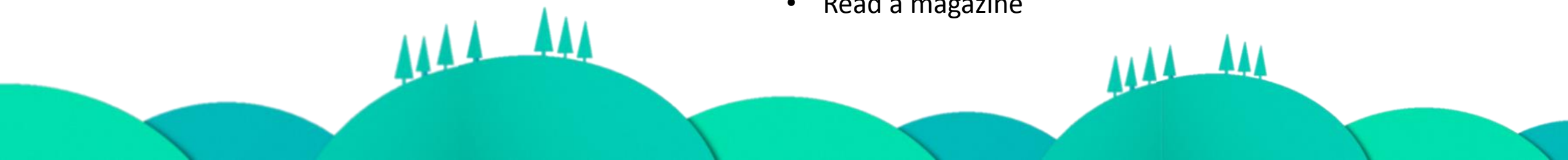
- Listen to music
- Have a cleansing cry
- Chat with a colleague
- Sing out loud
- Jot down dreams
- Step outside for fresh air
- Enjoy a snack or coffee

## 10 minutes

- Evaluate your day
- Write in a journal
- Call a friend
- Meditate
- Tidy your work area
- Assess your self-care
- Draw a picture
- Dance
- Listen to soothing sounds
- Surf the web (but avoid media)
- Read a magazine

## 30 minutes

- Get a massage
- Exercise
- Eat lunch with a colleague
- Take a bubble bath
- Read non-work related literature
- Spend time in nature
- Go shopping
- Practice yoga
- Watch your favorite TV show.





# There's Hope!

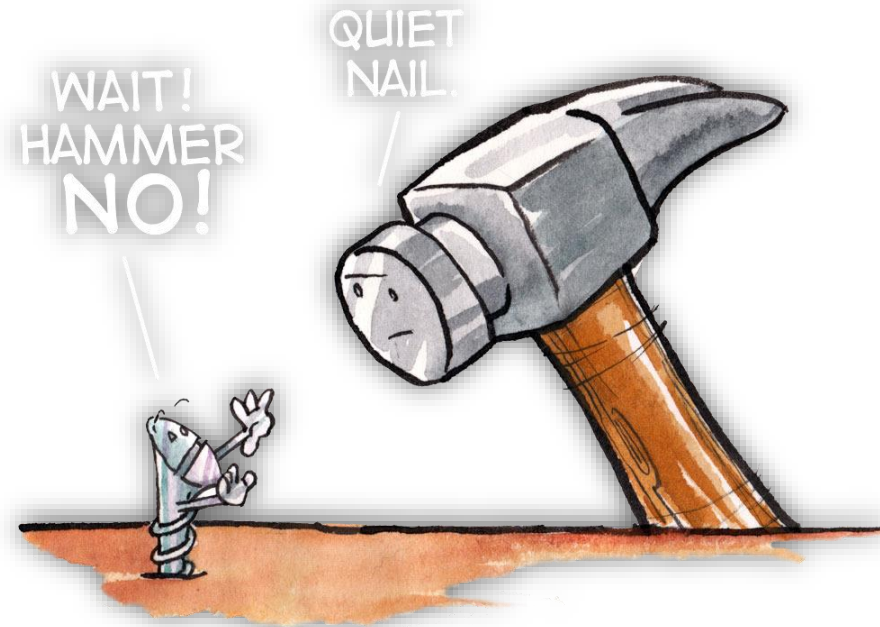
- **Trauma-informed organizations** create environments where injured brains have the best opportunity to thrive.
- **Research on resiliency and neuroplasticity** teach us that every person can bounce back from adversity.
- **Evidence-based Kernels** can lead us from intuitive responses to intentional action.



# Five Minute Break



# Looking Across Disciplines



**“If all you have is a hammer,  
everything looks like a nail.”** - *Abraham Maslow*

# How Wolves Change the Behavior of Rivers



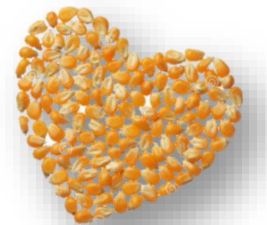
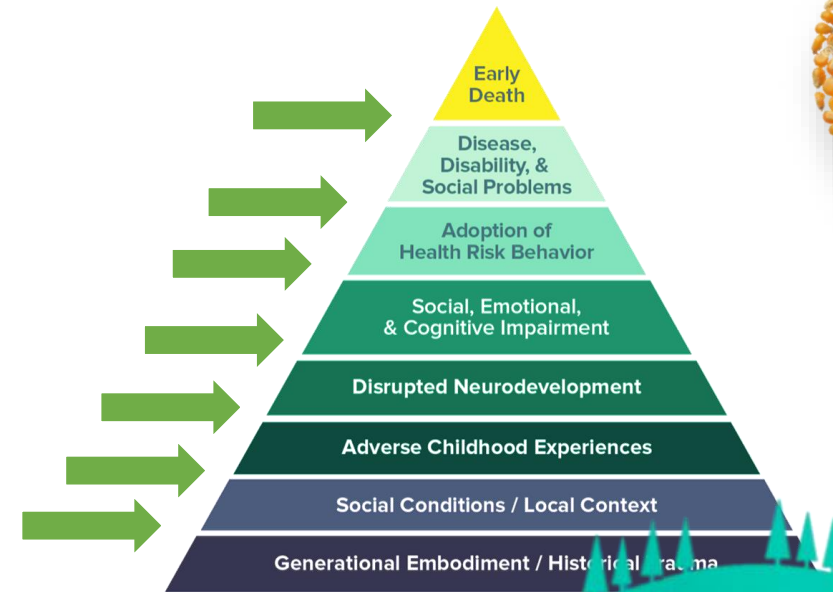
<https://www.youtube.com/watch?v=ysa5OBhXz-Q>

# How Wolves Change the Behavior of Rivers



# Let's Talk about Kernels

- Kernels are low or no-cost to evidence-based strategies recognized as fundamental units of behavioral influence.
- This means we can *unleash access* to strategies that support safety, relationship and skill building essential to our client's readiness to grow and learn.
- Kernels give us a way to implement simple but effective practices that interrupt the ACES trajectory, **move us from intuition to intention**, and improve outcomes.



# What is a Kernel?



- A kernel is the smallest unit of scientifically proven behavioral influence.
- Kernels produce quick easily measured change that can grow into much bigger change over time.
- They can be used alone **OR** combined with other kernels to create new programs, strategies or policies.
- Combinations of Kernels are considered “behavioral vaccines.”
- “Planted” Kernels create a culture.



# Managing Affect



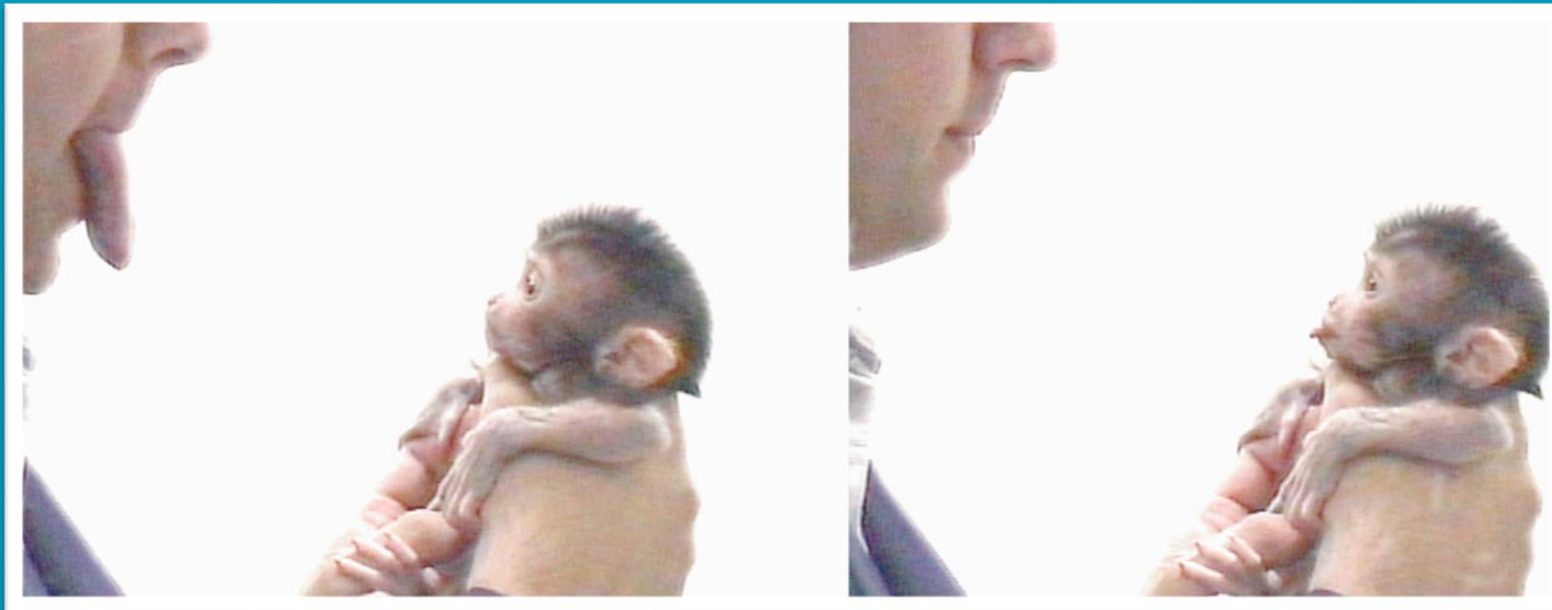
- **Mood** is your internal emotional state.
- **Affect** is how you externalize your emotions through verbal and non-verbal cues.
- Research shows that **trauma-impacted people are particularly aware of changes in affect**, which triggers the survival brain, decreasing their capacity to think and learn.





# Your Pain is My Pain

- **Mirror Neurons** help us to instinctively understand the actions of others and prime us to imitate what we see.
- This neural mechanism is involuntary and automatic.



# Rubber Hand Illusion



<https://www.youtube.com/watch?v=iPFSgLDCvAs>

# Your Pain is My Pain

- **Mirror Neurons** help us to instinctively understand the actions of others and prime us to imitate what we see. It is an involuntary and automatic neural mechanism.
- Consider that in our current context, Mirror Neurons comprise the biology of witness.





BLACK LIVES MATTER

I CAN BREATHE NOW

Out 23

# Managing Affect



- **Mood** is your internal emotional state.
- **Affect** is how you externalize your emotions through verbal and non-verbal cues.
- Research shows that **trauma-impacted people are particularly aware of changes in affect**, which triggers the survival brain, decreasing their capacity to think and learn.



# Attunement



- Traumatized people, especially youth, often **have difficulty communicating**, so their behaviors may become a front for conveying unmet needs or dysregulated affect.
- We may respond to the most distressing symptom, rather than the client's underlying emotion or need.
- Ask - **“What’s happening here?”** rather than, **“What’s wrong with this person?”**



# Consistency

- **Being predictable** by having **consistent responses to client behavior** is vital to establishing safety and reducing your client's need to exert control.
- **An intentional focus on building success, rather than establishing limits** – which may be associated with powerlessness or vulnerability – **should be your priority.**
- Know that your most challenging clients may initially react with both negative or positive responses.

# Routines and Rituals



- Building routines and rituals, particularly around trouble areas, can make meeting with you fun, safe and predictable.
- Research shows that establishing routines enhances client:
  - **Feelings of safety;**
  - **Ability to build trust and feelings of reliability within a relationship; and**
  - **Anticipation of an event, which reduces stress.**





# From Concept to Application – 10 Minute Breakout Session

Consider the following evidence-based kernels:

- **Affect Management**
- **Attunement**
- **Consistency**
- **Establishing Routines and Rituals**

**Discussion:**

1. **How is your organization intentionally promoting or using these strategies among staff and with clients?**
2. **Are there any situations you can recall where the use of one of these strategies would have helped a client to be successful?**
3. **Brainstorm ideas about how these strategies can be incorporated into your work.**



# Why Haven't We Heard this Before?



# Play

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- **Caretaker/child play** – is associated with lower rates of delinquency, substance abuse problems and psychiatric disorders such as depression and anxiety problems.
- **Physical play** – increases a child's ability to have healthy relationships by teaching basic skills for making and playing with friends.
- **Non-Directive Play** – improves the relationship with the parent, increases the happiness and contentment of the child, and results in greater attention span, improved creativity and resourcefulness.



# Turtle Breathing



“Turtle Breathing” is a technique for helping children with controlling anger.

Trusted adults use this technique in conjunction with the scripted story, “Tucker Turtle Takes Time to Tuck and Think.”

This technique:

- **Reduces anxiety**
- **Reduces temper tantrums**
- **Increases resiliency**
- **Increases self-control**



# Turtle Breathing - Recipe

Model remaining calm

Teach the child the steps of how to control feelings and calm down

Step 1: Recognize your feeling(s)

Step 2: Think “stop”

Step 3: Go inside your “shell” and  
take 3 deep breaths

Step 4: Come out when calm and  
think of a “solution”

Practice steps frequently

**Recognize and comment** when the child stays calm

Involve families: teach them the “Turtle Technique”





1. share
2. play
3. ignore
4. ask nicely
5. say, "please stop"
6. get a teacher
7. trade a toy or item
8. wait and take turns

### Helping children with their anger

Anger is a normal and healthy emotion. Children need to learn how to manage their anger without hurting themselves or others. Here are seven ways to help a child cope:

1. Be firm and fair, without getting angry. Limits are part of loving.
2. Understand that anger usually stems from the frustration of trying to *get* or *avoid* something.
3. Be clear. Tell the child what you want him or her to do in a specific situation. Try to avoid lectures. Say, "Try this instead."
4. Coach the child on how to handle conflict.
5. Role model healthy ways to deal with anger.
6. Try to avoid spanking as it teaches hitting.
7. Be patient: Learning takes time!

### Resources

[www.vanderbilt.edu/csefel](http://www.vanderbilt.edu/csefel) Free tools, videos, and information on children's social emotional wellbeing.

[www.challengingbehavior.org](http://www.challengingbehavior.org) Resources for social emotional interventions with children.

[www.safeschoolsmanitoba.ca](http://www.safeschoolsmanitoba.ca) Resources for parents, teachers, and students on various topics.

[www.vanderbilt.edu/csefel/documents/booklist.pdf](http://www.vanderbilt.edu/csefel/documents/booklist.pdf) List of books on anger for children aged 2-8.

### References

Lentini, R. (2007). *Tucker Turtle takes time to tuck and think : A scripted story to assist with teaching the "Turtle Technique"*. Retrieved March 1, 2010 from <http://www.vanderbilt.edu/csefel/scriptedstories/tuckerturtle.ppt>

Joseph, G.E. & Strain, P. S. (2003). *Module 2; Handout 2.6: Social emotional teaching strategies- Helping young children control anger and handle disappointment*. Retrieved March 1, 2010 from <http://www.vanderbilt.edu/csefel/modules-archive/module2/handouts/6.html>

Provence, S. (1985). *Helping young children channel their aggression*. Retrieved March 1, 2010 from [http://www.zerotothree.org/site/PageServer?pagename=ter\\_key\\_temp\\_aggression&AddInterest=1158](http://www.zerotothree.org/site/PageServer?pagename=ter_key_temp_aggression&AddInterest=1158)  
Developed by [keithmoen@gmail.com](mailto:keithmoen@gmail.com) - (March, 2010)

Tucker  
Turtle  
learns to  
tuck



An anger management  
brochure for children

# Verbal Praise



When any person receives specific, spoken recognition for engagement in a target act or behavior, it is widely demonstrated to:

- **Improve school and work performance**
- **Improve prosocial interactions**
- **Improve organizational functioning**
- **Increase engagement in the noticed behavior**

# Verbal Praise as a Social Reinforcer

What are the social reinforcers in your organization for this behavior?



Paying attention.



# Verbal Praise as a Social Reinforcer

How about for this behavior?



Attention Seeking or Distracting

# I – FEED – V

Use the I-Feed-V mnemonic to guide your use of praise

(Loveless, 1997):

**I** = immediate

**F** = frequent

**E** = enthusiastic

**E** = eye contact

**D** = describe the behavior

**V** = variety

Ratio of praise to criticism = 4:1 (Watson, 2004)

# Equity or Equality



**Equality**

doesn't mean

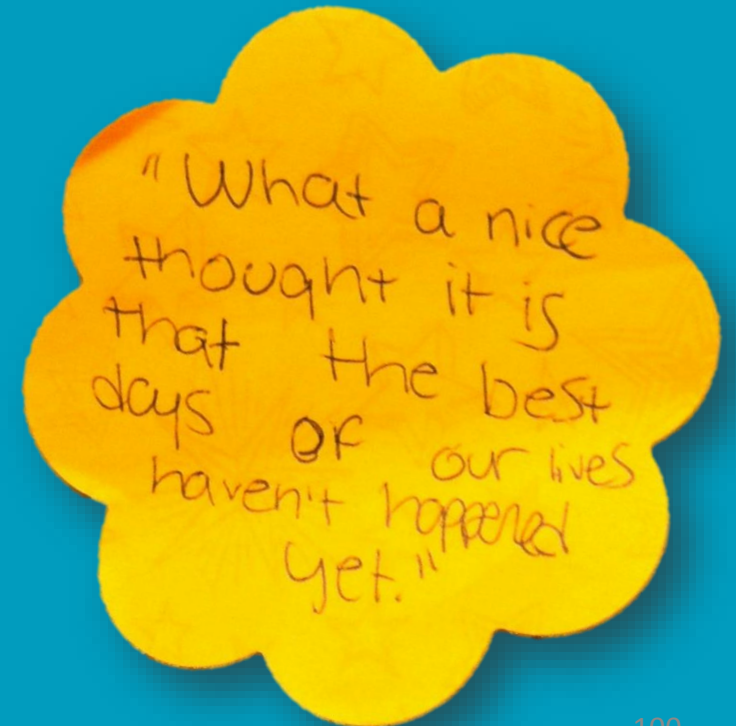
**Equity**

## Written Praise



Notes from recognizing clients and coworkers for a **specific** action or behavior is demonstrated to help across the span of life:

- **Do better at school or work**
- **Be more socially competent**
- **Reduce symptoms of ADHD, aggression and problem behaviors**
- **Increase engagement in the noticed behavior**



# Positive Note for Inhibiting a Challenging Behavior



If you work with children, a positive note sent home with a child for inhibiting an otherwise disruptive behavior is show to:

- Reduce disruptive and aggressive behavior
- Reduce problems at home
- Increase engagement at school



# Peer to Peer Notes



Notes of praise written from one peer to another, then **read aloud** or **posted on a public display** is widely shown to:

- Increase positive friendships
- Reduce neighborhood disorganization and crime
- Increase sense of safety
- Increase volunteerism
- Increase engagement in the noticed behavior



# From Concept to Application – 10 Minute Breakout Session

Consider the following evidence-based kernels:

- Engaging in or Teaching Non-Directive Play
- Breathing Strategies
- Specific Verbal, Written and Public Praise and Recognition

Discussion:

1. How is your organization intentionally promoting or using these strategies among staff and with clients?
2. Are there any situations you can recall where the use of one of these strategies would have helped a client to be successful?
3. Brainstorm ideas about how these strategies can be incorporated into your work.



# Five Minute Break



# Building Relationship is Key

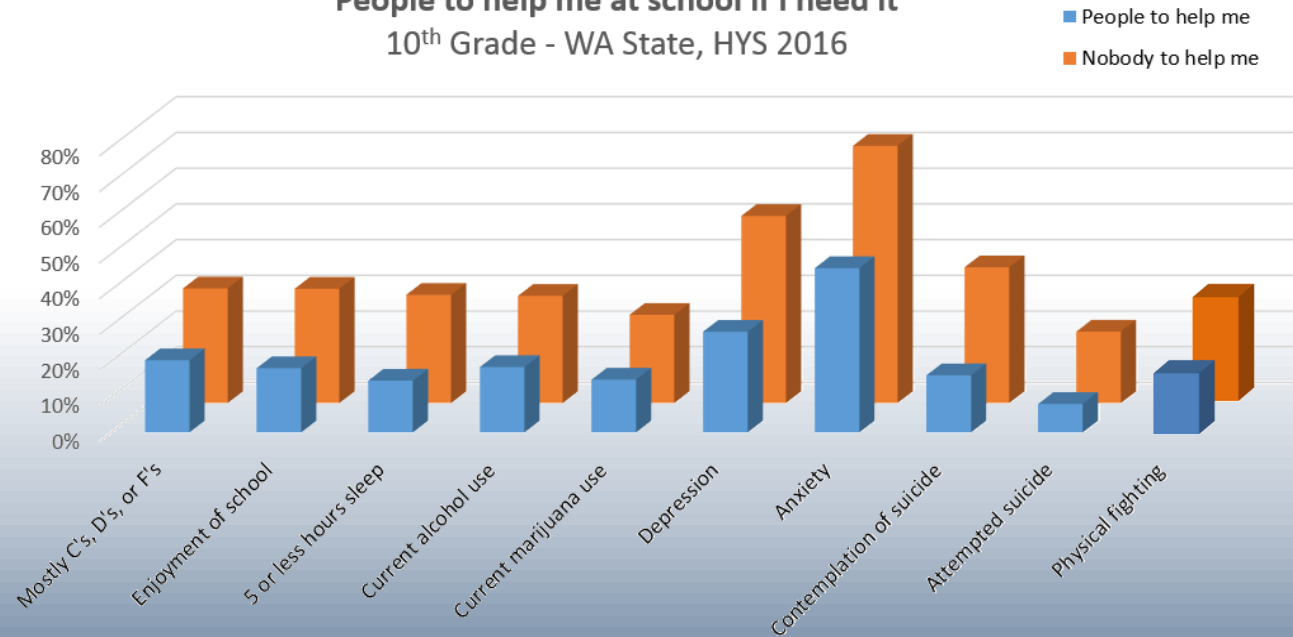
**Connection and relationship**  
are vital to improving outcomes  
for all clients.

*“Relationship is **the** evidence-based practice.”*

*– Chris Blodgett, WSU*



People to help me at school if I need it  
10<sup>th</sup> Grade - WA State, HYS 2016



# Annotation Activity: What Do You Need to Be Successful?

## Good Boss

- Notices when I do a good job
- Trusts me
- Patient

## Bad Boss

- Controlling
- Yells
- Doesn't believe in me



# Traits of Your Best Bosses



# Traits of Your Worst Bosses



# What Do Your Clients Need from You to be Successful?

Social Worker  
~~Good Boss~~

- Notices when I do a good job
- Trusts me
- Patient

Social Worker  
~~Bad Boss~~

- Controlling
- Yells
- Doesn't believe in me

# The Marshmallow Experiment

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**Feelings of reliability** within a relationship improves self-control.



<https://www.youtube.com/watch?v=JsQMdECFnUQ>

# Pleasant Greeting with Physical Touch



Also known as “handshakes.”

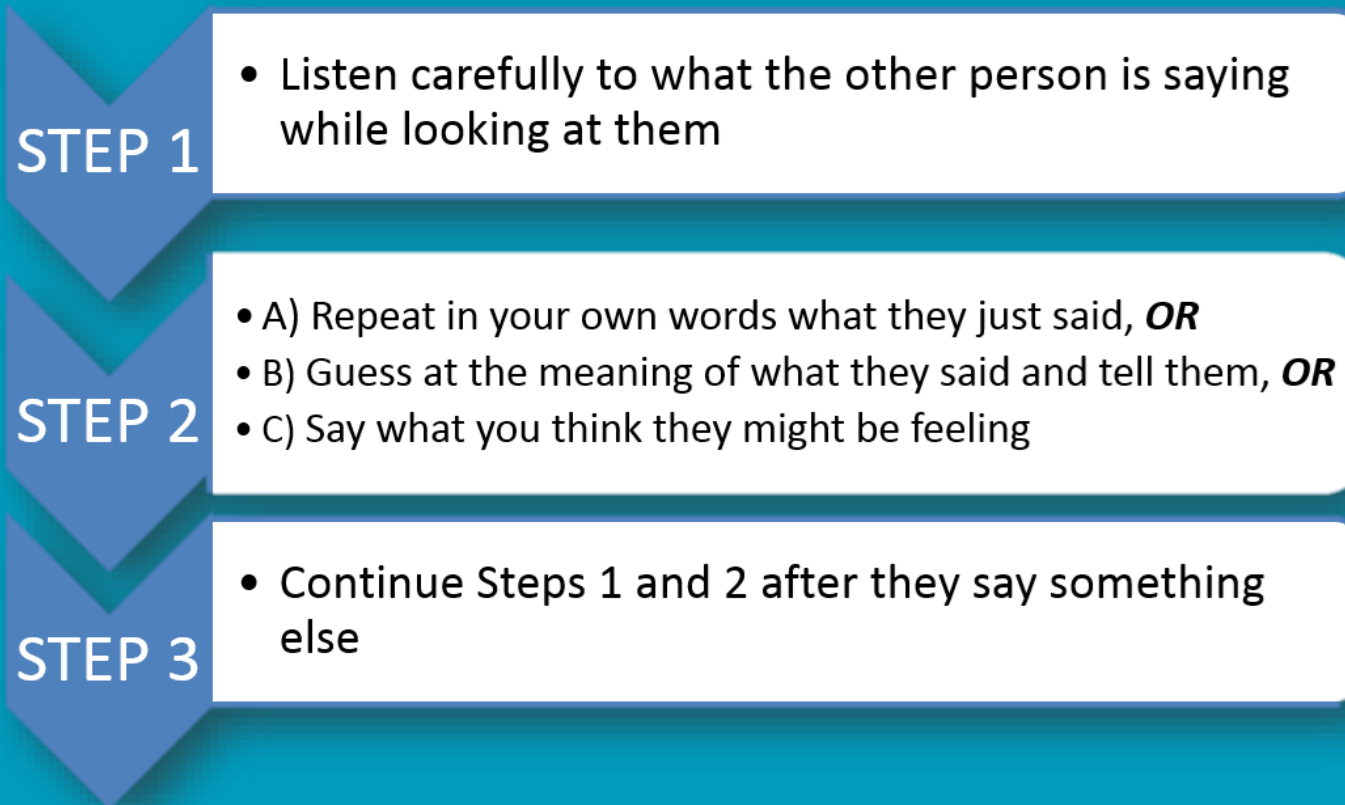
- Frequent friendly physical and verbal greetings **impact social status and perceptions of safety and harm.**
- They also affect **behavior streams of aggression, hostility and politeness.**



# Active Listening



**Active Listening** is a structured form of listening and responding that focuses the attention on the speaker. Research shows this technique increases mutual understanding and respect, while building emotional support.





# What's Your Stress Temperature – 10 Minute Breakout Session

Practice your active listening skills. Instructions:

Each person takes a turn at one of three roles: Speaker, Listener, Coach

- **Speaker:** Discuss your stress temperature from 0 degrees (life is like a Hawaiian vacation) to 100 degrees (I'm out of here and never coming back!). What's contributing to your temperature?
- **Listener:** Listen utilizing the active listening steps. Remember – you are listening, not sharing.
- **Coach:** Prompt the listener with active listening steps if the listener is struggling. Share what you observed.



# Private Reprimands



Public reprimands and humiliation can create a trauma response, especially in boys, that causes long lasting negative effects. Where possible, **low emotion** and **private reprimands** are a more effective strategy.

Research shows that this strategy:

- **Reduces aggression**
- **Reduces disruptive behavior**
- **Reduces emotional responding**



# Auditory/Visual Signal for Transition



The attention kernel works for youth and adults. It results in:

- Immediate reduction in transition time
- Increased academic engagement
- Reduced disruptive behavior
- Reduced aggression and bullying
- Reduced trauma response in traumatized people.



# Premack's Principle



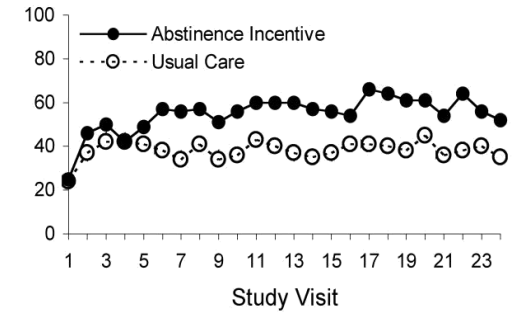
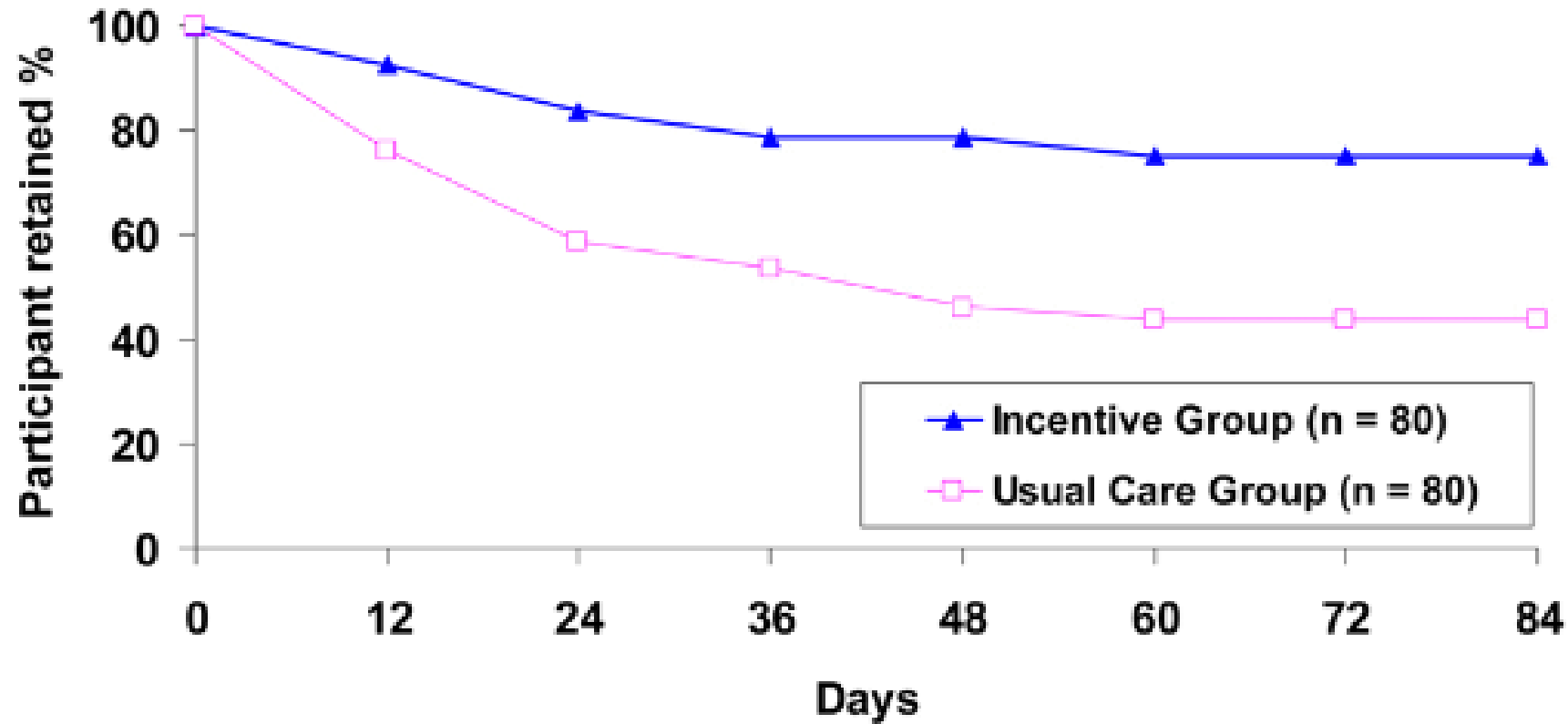
Also known as Contingency Management, the Mystery Motivator, Granny's Wacky Prizes, Prize Bowl and the Game of Life.

A praise strategy that uses activities as positive reinforcement instead of words. It results in:

- Reduction in deviant behavior across the lifespan
- Reduction in problem behaviors at school
- Increases desirable behavior in all age groups
- Reduces addiction.
- Promotes self-regulation instead of excitement



# Premack's Principle



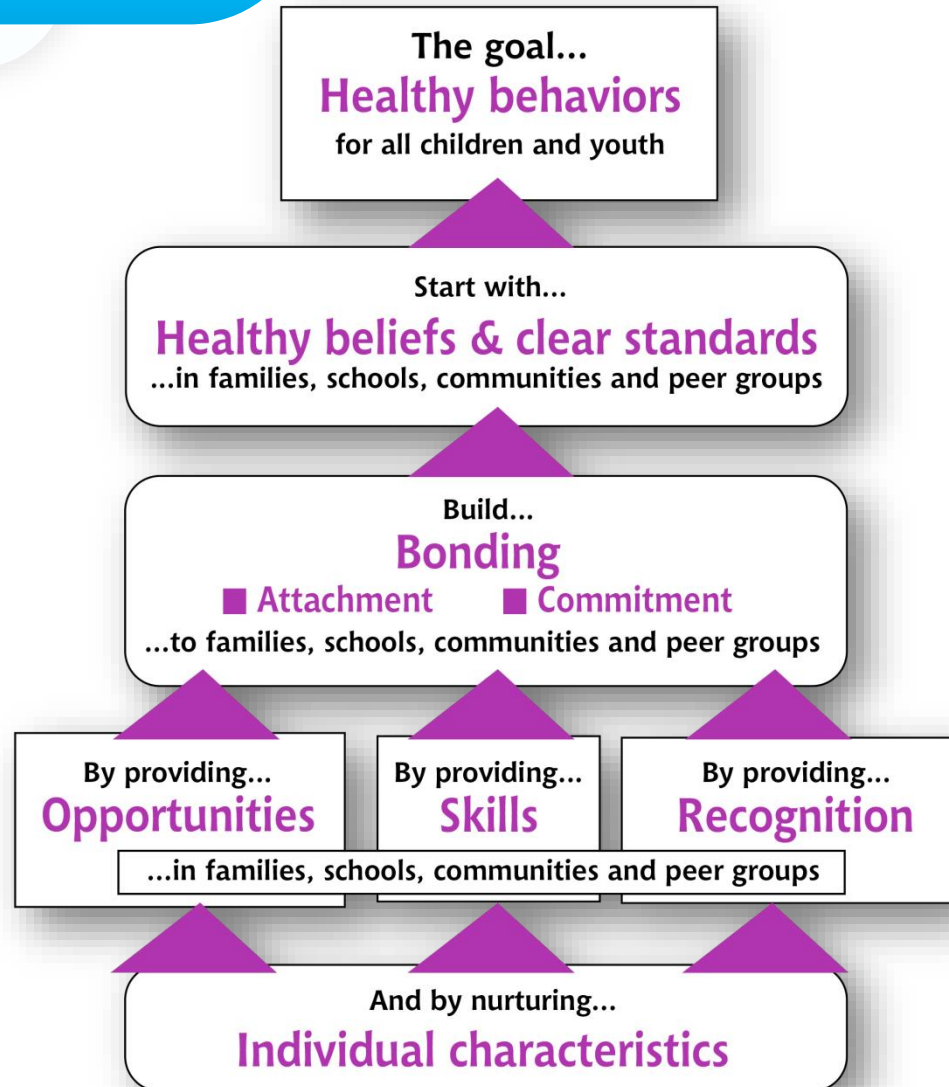
[Effects of a randomized contingency management intervention on opiate abstinence and retention in methadone maintenance treatment in China.](#)

Hser YI, Li J, Jiang H, Zhang R, Du J, Zhang C, Zhang B, Evans E, Wu F, Chang YJ, Peng C, Huang D, Stitzer ML, Roll J, Zhao M.

Addiction. 2011 Oct;106(10):1801-9. doi: 10.1111/j.1360-0443.2011.03490.x. Epub 2011 Jul 27.

PMID: 21793958

# The Social Development Strategy



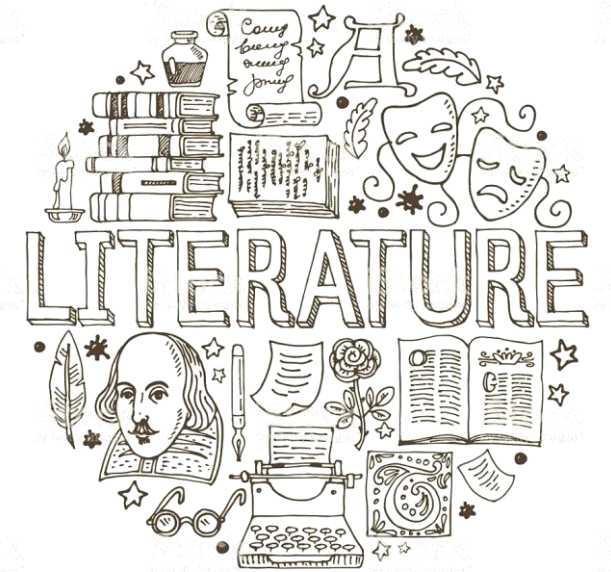
# Detached Observer Phenomenon



Reading helps clients build resilience by introducing them to solutions that may be relevant to their needs.

Through identification with characters, the reader has a vicarious experience that facilitates insight and a release of their own emotions.

Because the reader is a detached observer, they are less defensive and more open to a new experience.





# Authority Figure Lottery

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When an authority figure like a club director **sends a note home** or **calls a parent** about a young person's positive behavior, research shows that action results in:

- **Increases in engagement**
- **Reductions in disruptive behavior**
- **Reductions in aggression**





# Gratefulness Check-in



When people are asked and share what they are grateful for once per week, research shows:

- **Increase in happiness**
- **Improved sleep**



# Brain Nutrient Deficiencies Impact Health Across the Globe

## Omega 6

Potato chips  
Bread  
Cookies  
Crackers  
Salad dressings  
Margarine  
School food  
Fast Food  
Snacks  
Prepared foods  
Grain fed meats  
Hydrogenated fats



## Omega 3

Mackerel, Salmon or herring  
Range fed meats  
Cod liver oil  
Flaxseed oil  
Flaxseed ground  
Walnuts, Pecans, Brazil Nuts  
Pumpkin seeds  
Tofu (moderation)  
Green leafy veggies (Spinach).  
Tahini (sesame seed spread)  
Hummus (chickpea spread)  
Eggs (non-grain feed)

The alterations in brain chemistry that have resulted from our changing diet during the last 60 years contributes to trends of depression, bipolar disorder, autism, violence and academic problems.

# Omega-3 Supplementation

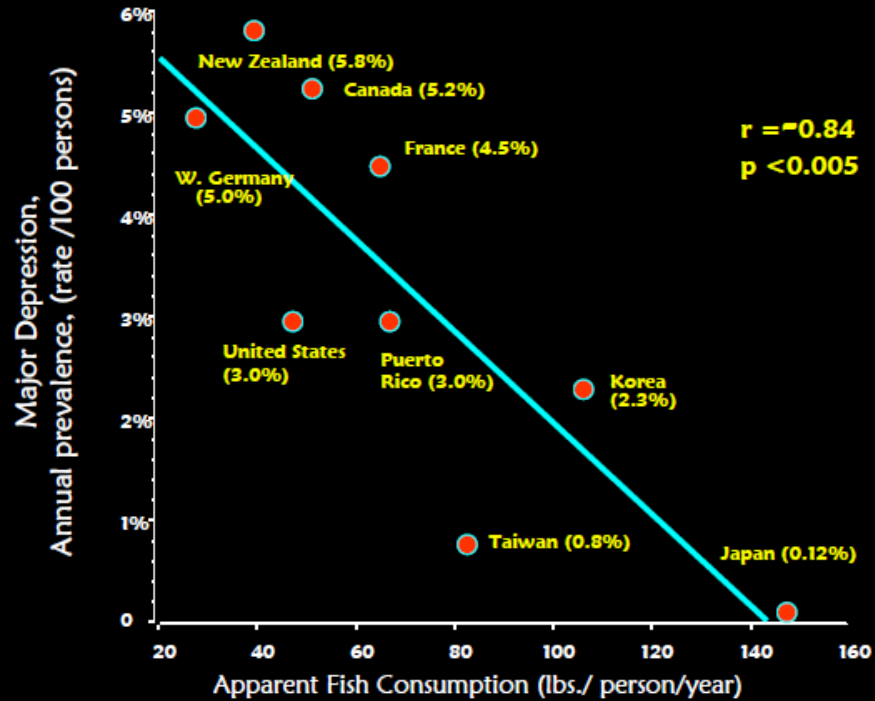


- Omega 3 has no harmful effects
- Well-documented evidence for Reducing aggression, depression, anxiety, bipolar disorder, post partum depression and borderline personality disorder
- 2002 Oxford University study and 2009 Dutch Corrections study of found Omega-3 supplementation achieved a 37% reduction in episodes of inmate aggression.
- **In 2006, the American Psychiatric Association recommend that all psychiatric patients receive at least 1 gram of omega-3 per day to reduce symptoms of mental illness.**



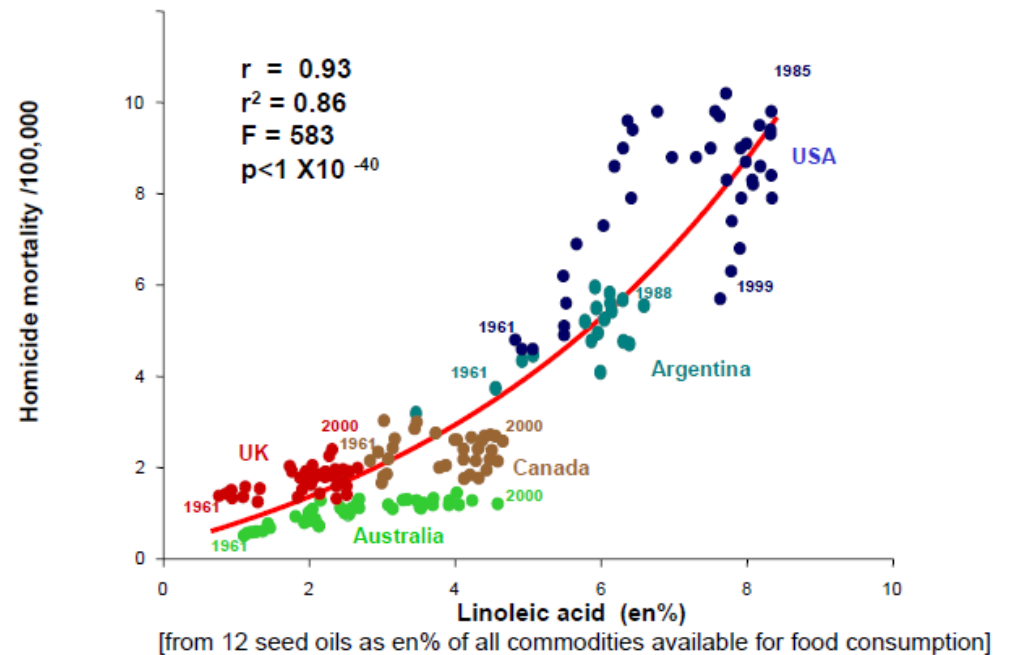
# National Institute of Health

**Fish Consumption and Major Depression Annual Prevalence by Country**



Hibbeln, Lancet 1998;351:1213

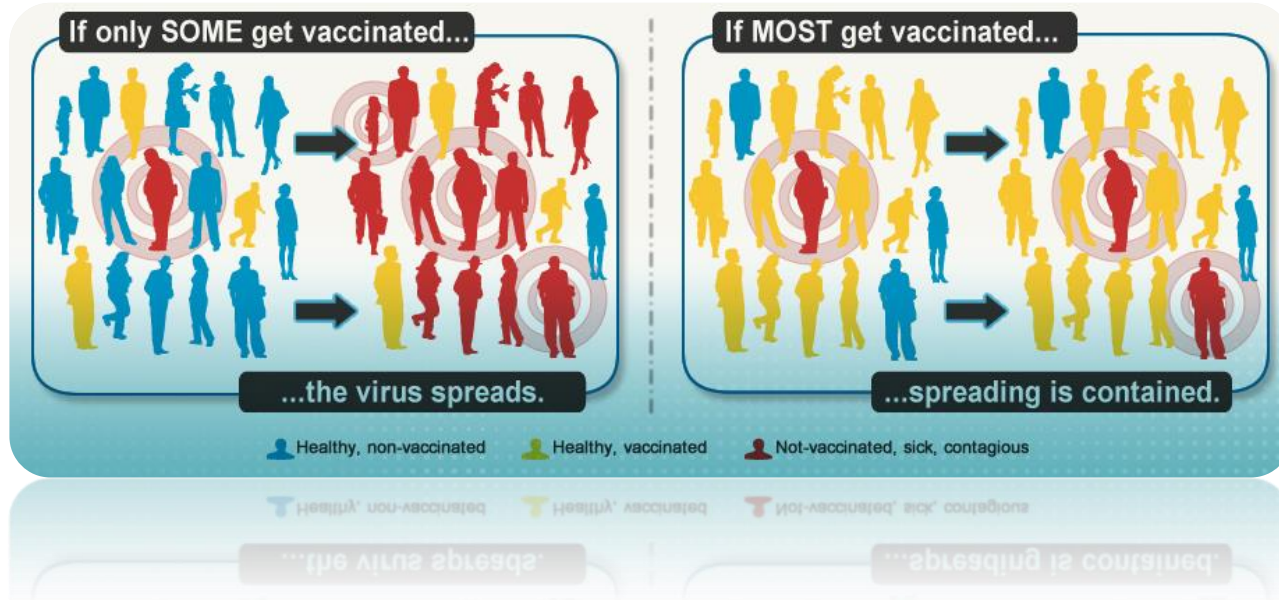
**Homicide mortality and availability of linoleic acid (en%)**  
Combined **Australia, United Kingdom, Canada**  
**Argentina and USA** data from 1961-2000



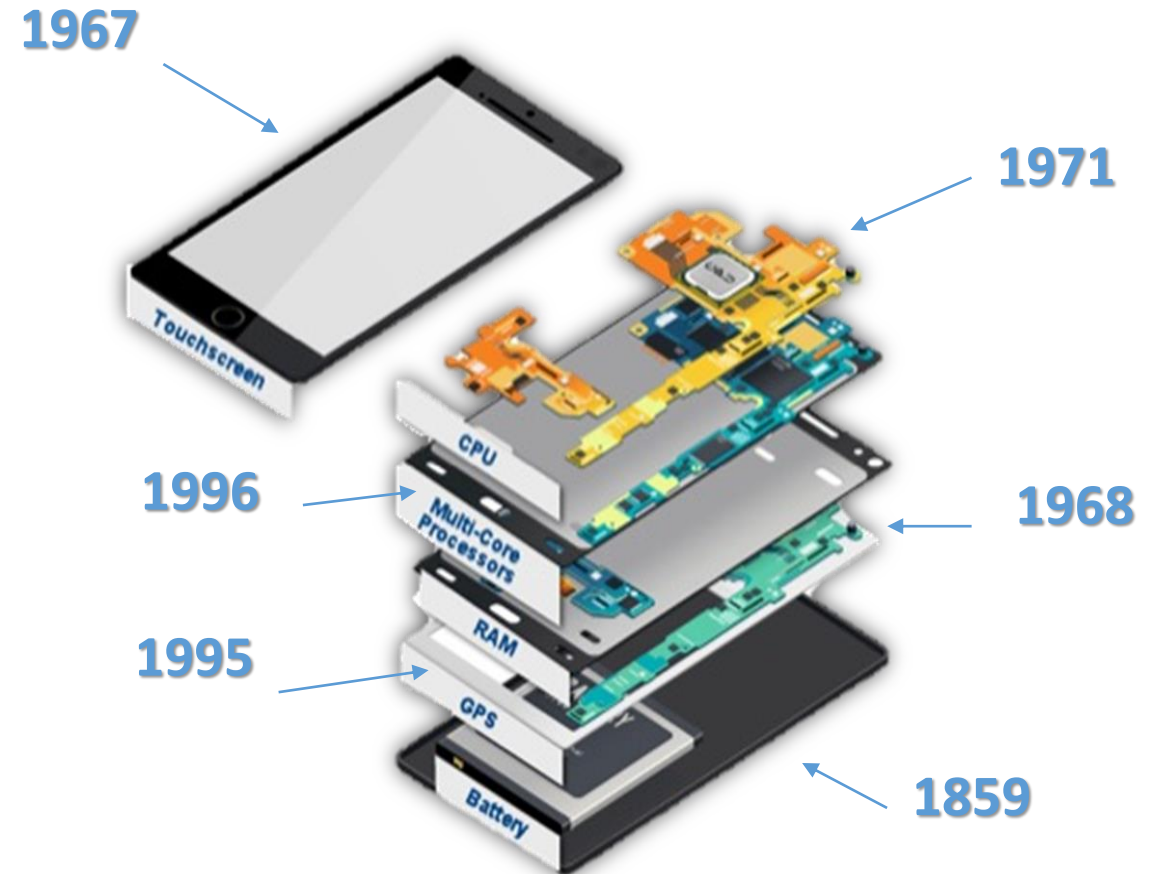
$f=y_0+a \cdot \exp(b \cdot x)$   $y_0 = -1.98207$   $a = 2.14258$   $b = 0.203595$

Hibbeln et al, Lipids 2004; 23: 1207-1213

# Behavioral Vaccines



If you work together to provide effective organization-wide behavioral vaccines for your clients, how will your resources and culture be impacted?



# Seattle Social Development Strategy



Adults instructed to greet and shake hands with five kids NOT in their classroom each day. They also gave out “caught you being good” tickets every day. 10 years later, kids who received this simple strategy had:

- Reduced alcohol, tobacco and other drug initiation
- Reduced aggression
- Had significant improvement on achievement tests
- Were significantly less likely to have engaged in school misbehavior (i.e., cheating, truancy, or being removed from class for misbehavior)

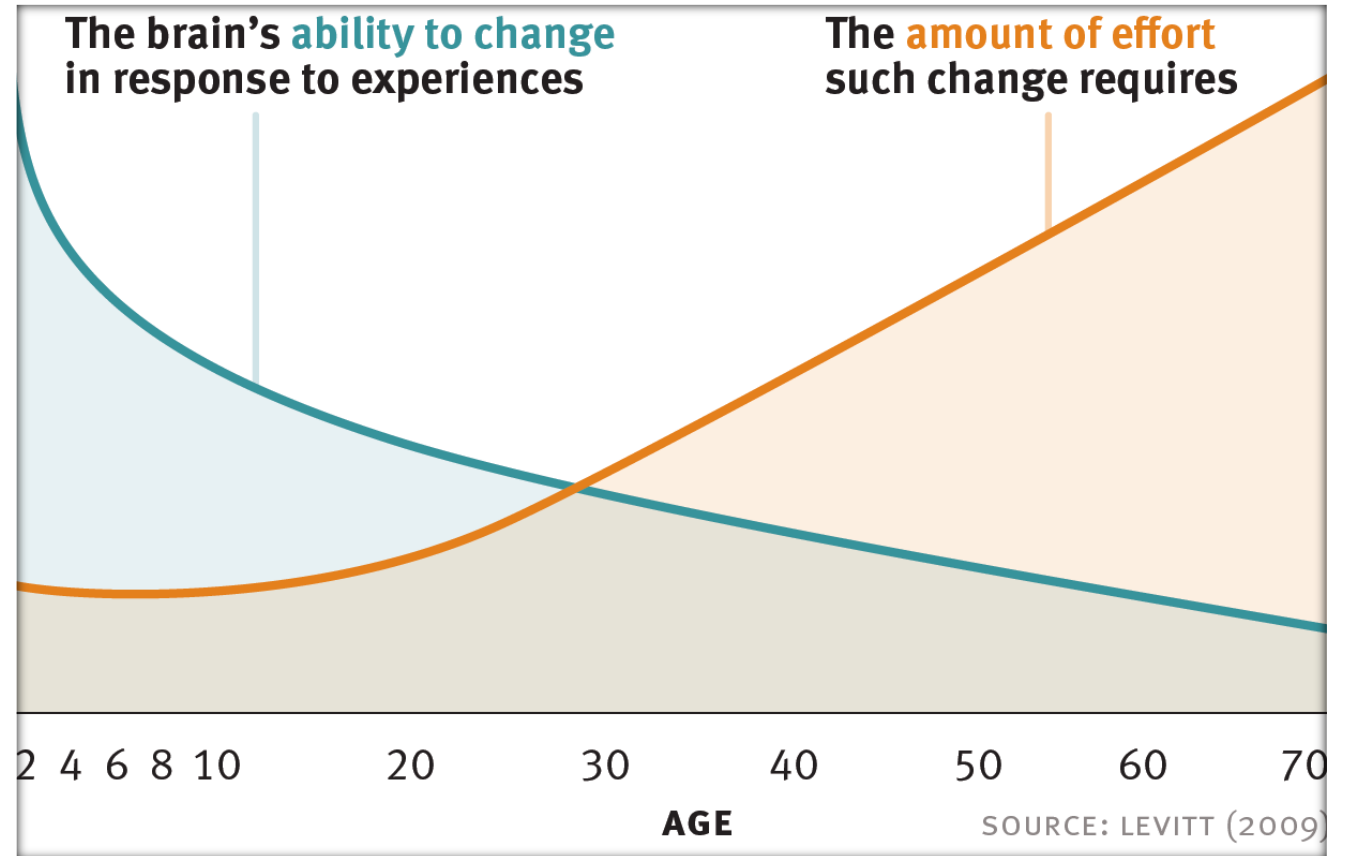
# Timing Makes a Difference

As we age, it takes more effort for the brain to change in response to experiences.

The plasticity of our brains shrinks when our neurons struggle to form new connections (synapses) with other neurons.

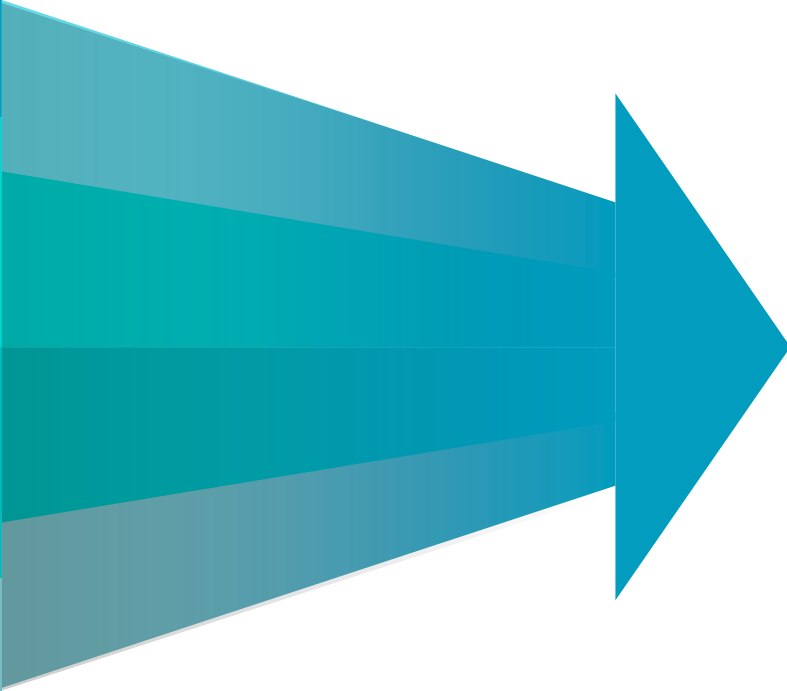
Our brain's plasticity is the strongest in the first few years after birth. It is easier to form strong brain pathways during the early years and harder to repair pathways as we age.

That's why building resiliency through a community of CARE is so important!



# What else can we do?

- Be clear, consistent, predictable, and follow through
- Maintain high expectations and assume positive intent, build on success rather than establishing limits
- Provide guided opportunities to participate through voice and choice
- Focus on the feeling of safety, building trust, and reliability of relationships





# The Bottom Line

- Understanding ACES gives you the power to significantly impact the trauma trajectory of your clients.
- Remember Kaiser Permanente's diet and nutrition program dropouts? The researchers learned that their very successful intervention wasn't just treating nutrition problems, it was treating personal solutions!
- **If you take away a client's personal solution before teaching them a better one, you're just digging a hole for them to fall back into.**



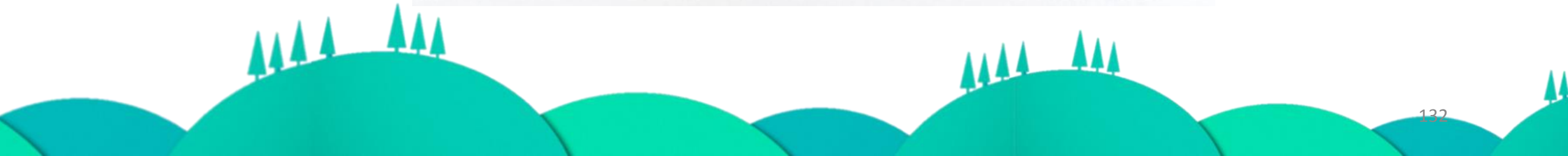
# Your Beliefs Matter!



<https://www.youtube.com/watch?v=xQ6wr6vRfGo>

# Five Minute Break





# Adverse Childhood Experiences Study (ACES)

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**ACES** began as study in the late 1980's and 1990's at a diet and nutrition center managed by Kaiser-Permanente in San Diego, California. It became the largest study ever to examine social determinants of health.

**Over 17,000** people participated in the study, which ultimately a direct connection between traumatic childhood experiences and health.

**Most critically,** the Centers for Disease Control and Prevention (CDC) now recognize ACES as a *public health crisis*.

*ACES Participants were mostly:*

- Middle class, average age of 57
- 80% White, 10% Black, 10% Asian
- 74% Some college
- 44% Graduated college
- 49.5% Men



*But since the original ACE study, research indicates that ACES are more prevalent for those belonging to non-dominant cultures and living in poverty...*



# THREE TYPES OF ACEs MEASURED

The original ACE study measured three types of ACEs through a 10 question assessment:

**But, there's  
actually more than  
just these...**

## ABUSE



Physical



Emotional



Sexual

## NEGLECT



Physical



Emotional

## HOUSEHOLD DYSFUNCTION



Mental Illness



Incarcerated Relative



Mother treated violently



Substance Abuse



Divorce

ACEs interact with stressors commonly faced by racial and sexual minorities—such as discrimination, stigma, and rejection—to contribute to behavior, health and opportunity disparities.



# ACEs and Intersectionality

- Ethnic and sexual minority children are significantly underrepresented in the ACEs research.
- When cultural minorities are included in the data, Black, Hispanic and LGBT children are consistently shown to be exposed to more adversities than white children.
- Similarly, those living in economically stressed communities are more likely to experience ACEs.

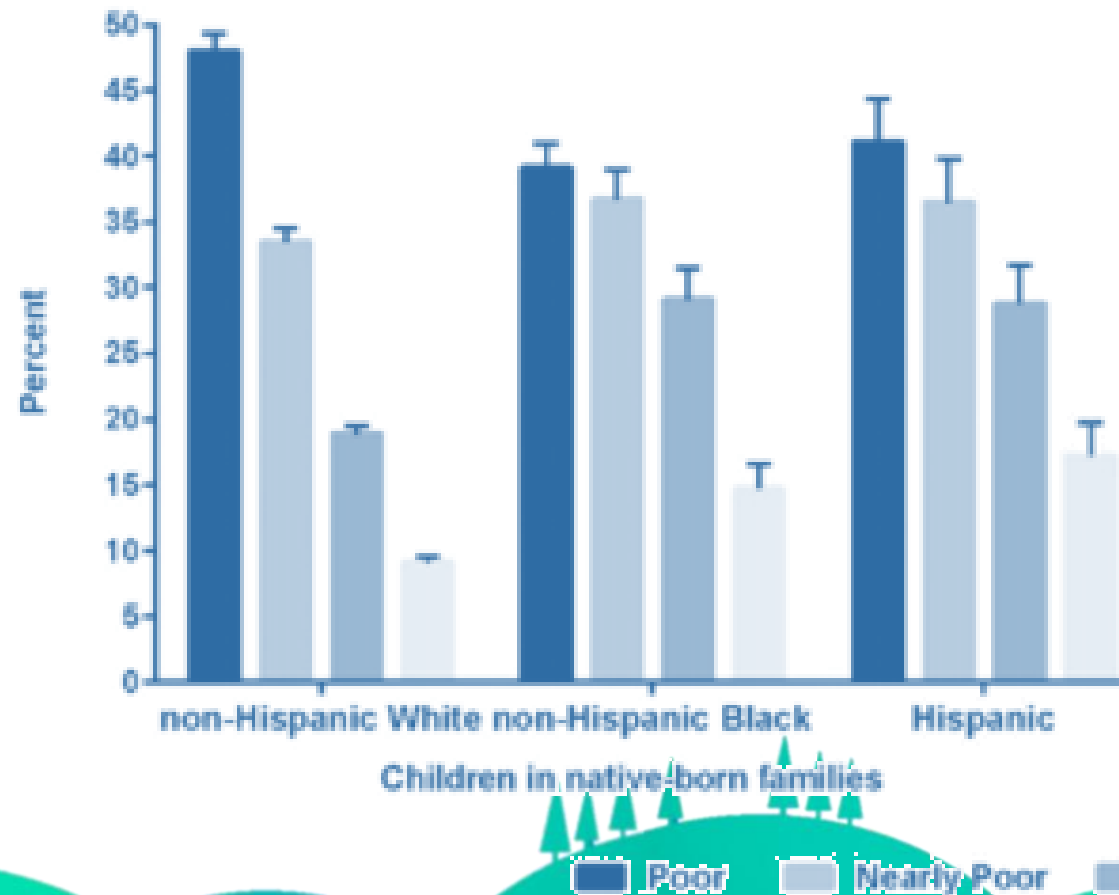
**This has led to a reexamination of the ACEs that predict long-term negative health and opportunity outcomes.**





# RACE, ETHNICITY AND INCOME INFLUENCE EXPOSURE

ACE Exposure by Race/Ethnicity and Income Level  
N=84,837



**Since the original ACE study, exposure to additional early life stressors are being studied.**

**Acute Trauma:** is caused by a *single* traumatic event that triggers extreme emotional or physical stress.

**Complex Trauma:** is caused by exposure to *multiple* traumatic events. The long-term impact of this exposure is severe and pervasive.

**Historical Trauma:** is a complex and collective trauma experienced over time and across generations by a group of people who share an identity, affiliation, or circumstance.



# 3 Realms of ACEs

ACEs Connection accelerates the global movement to prevent and heal adverse childhood experiences (ACEs), and supports communities to work collaboratively to solve our most intractable problems. Left unaddressed, toxic stress from ACEs harms children and families, organizations, systems and communities, and reduces the ability of individuals and entities to respond to stressful events with resiliency. The ACEs in these three realms intertwine throughout people's lives, and affect the viability of organizations, systems and communities.



# The Brain Science

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**A person's environment** and experience shapes their behavior and health.

**Our brain** is designed to prioritize survival.

**Hormones** like Cortisol are released when our “Fight, Flight, or Freeze” response is triggered.



# Toxic Stress

**Prolonged exposure** to Cortisol and other stress hormones is toxic, and makes permanent changes to the brain.

This means you may encounter clients who are **perfectly adapted to survive** in their home environment, but who **cannot turn-off** their behavioral and stress response adaptations in your organization, community or other “normal” situations.



# ACES LEAD TO THE 10 MOST COMMON CAUSES OF EARLY DEATH

alcoholism

violence

physical inactivity

illicit drug use

**severe obesity**

injected drug use

suicide attempts

smoking

depression

more than 30 sexual partners



# REFRAMING OUR POINT OF VIEW

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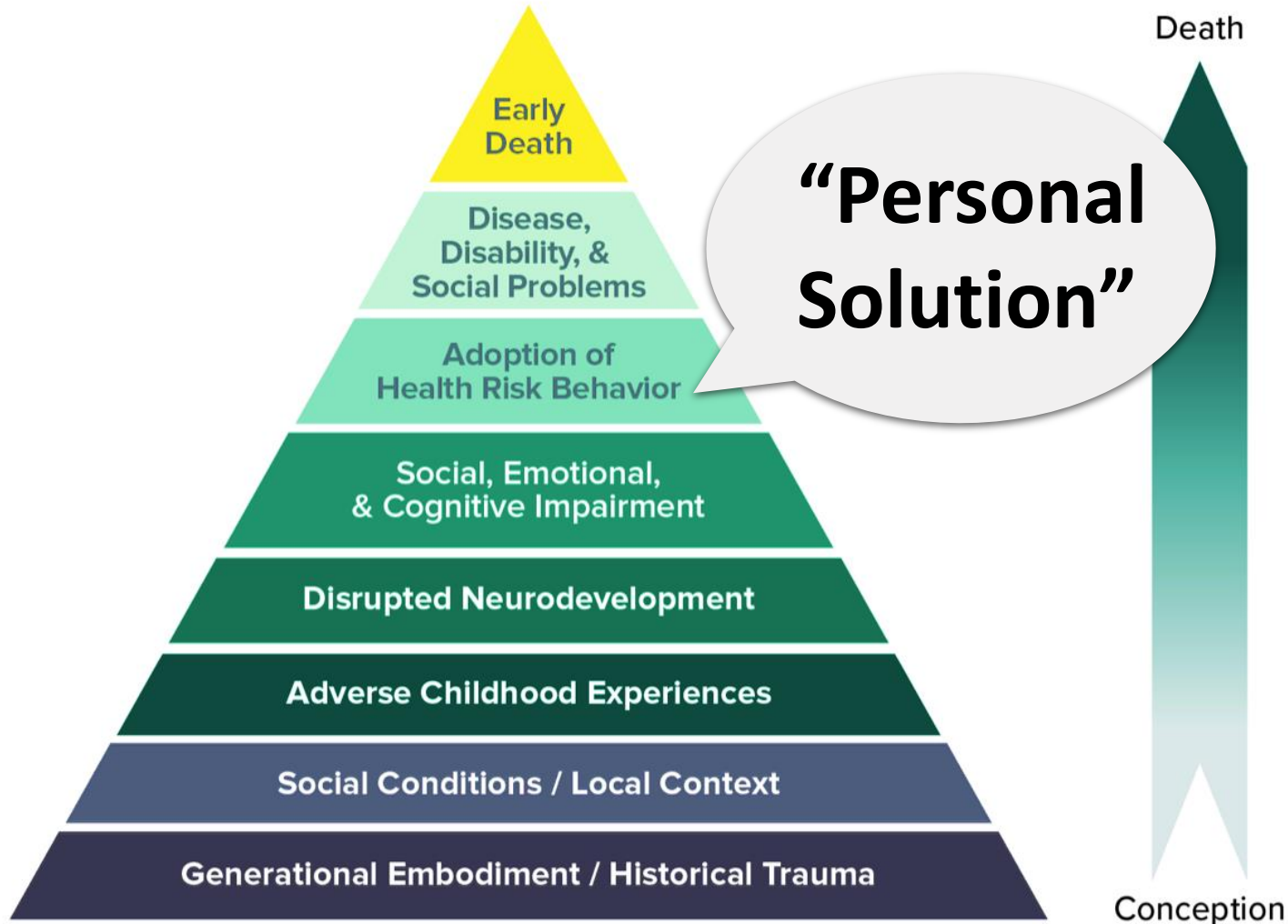
**With an ACE score of 0**, the majority of adults have few, if any, risk factors for the most common diseases leading to early death.

**With an ACE score of 4 or more**, the majority of adults have multiple risk factors for these diseases or the diseases themselves.

*Much of what we see as problem behaviors should actually be viewed as a **personal solution** to an unrecognized prior adversity.*



# The ACE Pyramid



Mechanism by which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan

*Without accounting for individual levels of resiliency,* this pyramid depicts how impacts to health and well-being can occur over a lifetime as a result of exposure to Adverse Childhood Experiences.

The ACE study found links between ACEs and adult health risks, often leading to chronic health conditions.

Those with **4 or more ACEs** were found to be:

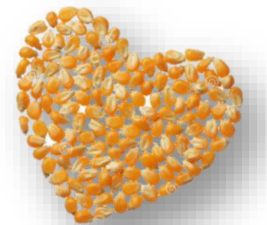
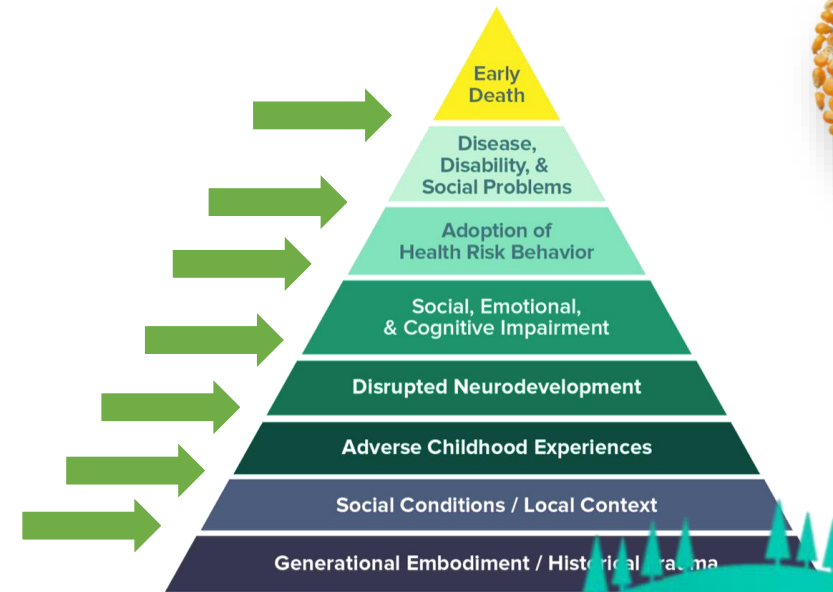
- **12.2x** as likely to have attempted suicide
- **7.4x** as likely to consider themselves to be an alcoholic
- **4.7x** as likely to have ever used illicit drugs
- **4.6x** as likely to have had 2 or more weeks of depressed mood in the past year
- **3.2x** as likely to have had 50 or more intercourse partners, and
- **2.3x** as likely to smoke





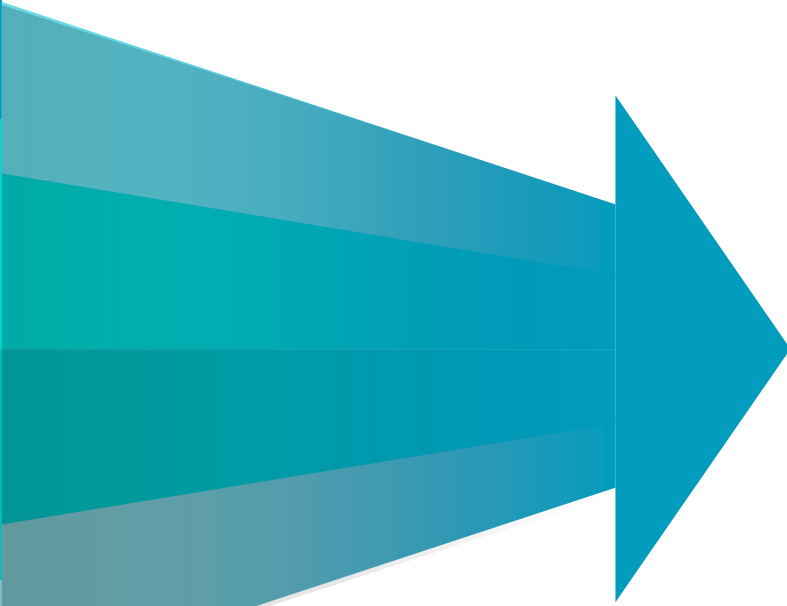
# Let's Talk about Kernels

- Kernels are low or no-cost to evidence-based strategies recognized as fundamental units of behavioral influence.
- This means we can *unleash access* to strategies that support safety, relationship and skill building essential to our client's readiness to grow and learn.
- Kernels give us a way to implement simple but effective practices that interrupt the ACES trajectory, **move us from intuition to intention**, and improve outcomes.



# What else can we do?

- Be clear, consistent, predictable, and follow through
- Maintain high expectations and assume positive intent, build on success rather than establishing limits
- Provide guided opportunities to participate through voice and choice
- Focus on the feeling of safety, building trust, and reliability of relationships





**Adverse Childhood Experience (ACE) Categories, by Sexual Orientation: 2012 North Carolina, 2011 Washington, and 2011 and 2012 Wisconsin Behavioral Risk Factor Surveillance System Surveys**

ACE Category	Lesbian, Gay, or Bisexual, No. (Weighted %)	Heterosexual, No. (Weighted %)	Unadjusted OR (95% CI)
Physical abuse	210 (29.7)	4828 (17.0)	2.05 (1.62, 2.61)
Sexual abuse	217 (29.1)	3959 (11.7)	3.11 (2.44, 3.95)
Emotional abuse	328 (43.8)	8101 (28.3)	1.97 (1.57, 2.45)
Parental separation or divorce	220 (34.7)	6849 (27.0)	1.43 (1.14, 1.80)
Adult mental illness in household	229 (33.2)	4755 (16.8)	2.46 (1.95, 3.10)
Adult substance abuse in household	284 (39.8)	8235 (28.0)	1.69 (1.36, 2.11)
Incarcerated household member	79 (15.5)	1645 (7.9)	2.15 (1.55, 2.98)

**Adverse Childhood Experience (ACE) Score, by Sexual Orientation: 2012 North Carolina, 2011 Washington, and 2011 and 2012 Wisconsin Behavioral Risk Factor Surveillance System Surveys**

ACE Score***	Lesbian, Gay, or Bisexual, No. (Weighted %)	Heterosexual, No. (Weighted %)
0	183 (26.8)	12 971 (40.4)
1	148 (18.7)	6 663 (23.1)
2	94 (12.2)	3 695 (12.7)
3	82 (11.9)	2 411 (8.7)
4	70 (9.4)	1 697 (6.1)
5	49 (6.5)	1 121 (4.2)
6	41 (6.3)	683 (2.8)
7	36 (5.7)	348 (1.6)
8	8 (2.6)	101 (0.5)

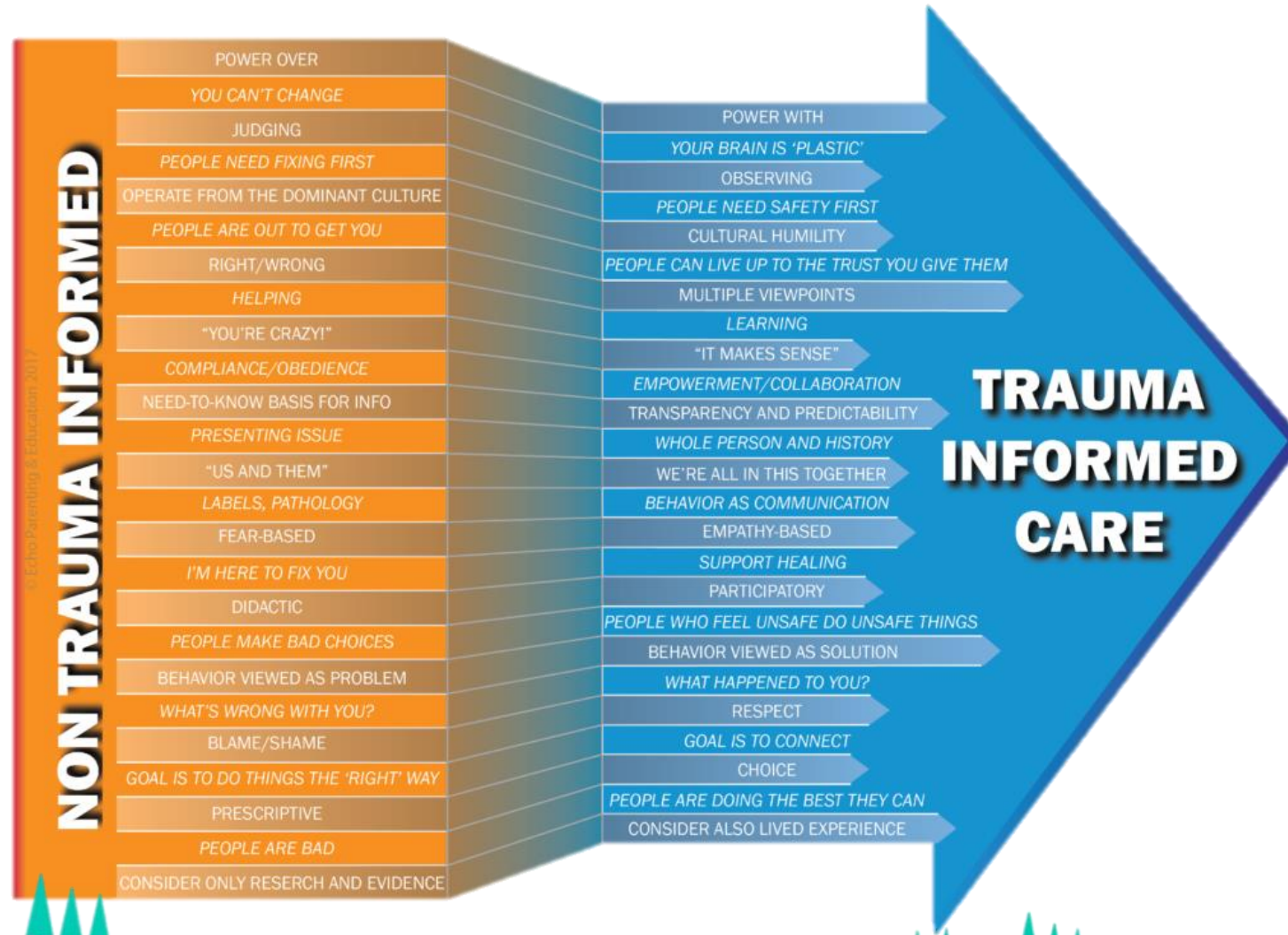
	Hispanic	Non-Hispanic black	Non-Hispanic white	Total
<b>Children of immigrant parents</b>				
No. of respondents	7,119	1,608	4,422	13,150
Mean no. of adversities	<b>0.79 (0.03)<sup>a</sup></b>	<b>0.85 (0.06)<sup>a</sup></b>	0.63 (0.04)	0.77 (0.02)
0	<b>52.24 (1.28)<sup>a</sup></b>	<b>51.59 (2.37)<sup>a</sup></b>	65.27 (1.63)	54.59 (0.97)
1	<b>31.11 (1.16)<sup>a</sup></b>	<b>27.49 (2.18)<sup>a</sup></b>	20.33 (1.34)	28.69 (0.89)
≥2	16.65 (1.01)	<b>20.92 (2.03)<sup>a</sup></b>	14.40 (1.27)	16.72 (0.77)
<b>Individual adversities (% exposed)</b>				
Financial hardship				
Parental divorce/separation				
Parent died				
Parent served time in jail				
Domestic violence between parents				
Victim or witness of neighborhood violence				
Household member with mental illness				

	Poor	Nearly poor	Middle income	High income	Trend
<b>Children of U.S.-born parents</b>					
No. of respondents					
Mean no. of adversities	<b>1.71 (0.04)<sup>a</sup></b>	<b>1.39 (0.03)<sup>a</sup></b>	<b>0.90 (0.02)<sup>a</sup></b>	<b>0.47 (0.01)<sup>a</sup></b>	<sup>b</sup>
<b>Individual adversities (% exposed)</b>					
Financial hardship					
Parental divorce/separation					
Parent died					
Parent served time in jail					
Domestic violence between parents					
Victim or witness of neighborhood violence					
Household member with mental illness					

	Hispanic	Non-Hispanic black	Non-Hispanic white	Total
<b>Children of U.S.-born parents</b>				
No. of respondents	5,724	8,011	57,952	71,687
Mean no. of adversities	<b>1.26 (0.05)<sup>a,b</sup></b>	<b>1.27 (0.03)<sup>a,b</sup></b>	<b>0.90 (0.01)<sup>b</sup></b>	<b>1.01 (0.01)<sup>b</sup></b>
0	<b>42.45 (1.66)<sup>a,b</sup></b>	<b>37.40 (1.04)<sup>a,b</sup></b>	<b>54.84 (0.44)<sup>b</sup></b>	<b>50.38 (0.41)<sup>b</sup></b>
1	<b>26.39 (1.52)<sup>b</sup></b>	<b>29.97 (1.04)<sup>a</sup></b>	<b>23.63 (0.39)<sup>b</sup></b>	<b>25.04 (0.37)<sup>b</sup></b>
≥2	<b>31.16 (1.52)<sup>a,b</sup></b>	<b>32.63 (1.06)<sup>a,b</sup></b>	<b>21.54 (0.39)<sup>b</sup></b>	<b>24.58 (0.37)<sup>b</sup></b>
<b>Individual adversities (% exposed)</b>				
Financial hardship	<b>30.56 (1.49)<sup>a</sup></b>	<b>30.54 (1.01)<sup>a</sup></b>	<b>23.23 (0.39)<sup>b</sup></b>	<b>25.43 (0.38)<sup>b</sup></b>
Parental divorce/separation	<b>26.32 (1.42)<sup>a,b</sup></b>	<b>23.35 (0.98)<sup>b</sup></b>	<b>22.01 (0.39)<sup>b</sup></b>	<b>22.76 (0.36)<sup>b</sup></b>
Parent died	<b>3.32 (0.48)<sup>b</sup></b>	<b>6.50 (0.59)<sup>a</sup></b>	<b>2.59 (0.15)<sup>b</sup></b>	<b>3.34 (0.16)<sup>b</sup></b>
Parent served time in jail	<b>11.37 (1.09)<sup>a,b</sup></b>	<b>12.54 (0.75)<sup>a,b</sup></b>	<b>6.10 (0.22)<sup>b</sup></b>	<b>7.83 (0.24)<sup>b</sup></b>
Domestic violence between parents	<b>12.97 (1.13)<sup>a,b</sup></b>	<b>8.99 (0.66)<sup>a</sup></b>	6.44 (0.23)	<b>7.66 (0.24)<sup>b</sup></b>
Victim or witness of neighborhood violence	<b>10.64 (0.91)<sup>a,b</sup></b>	<b>16.92 (0.85)<sup>a,b</sup></b>	6.92 (0.26)	<b>9.07 (0.26)<sup>b</sup></b>
Household member with mental illness	<b>10.92 (0.96)<sup>b</sup></b>	<b>8.80 (0.61)<sup>b</sup></b>	<b>9.86 (0.28)<sup>b</sup></b>	<b>9.81 (0.25)<sup>b</sup></b>
Drug or alcohol problem in household	<b>14.15 (1.08)<sup>a,b</sup></b>	<b>10.92 (0.72)<sup>b</sup></b>	<b>11.87 (0.30)<sup>b</sup></b>	<b>11.98 (0.28)<sup>b</sup></b>
Unfair treatment due to race/ethnicity	<b>5.55 (0.61)<sup>a</sup></b>	<b>8.57 (0.60)<sup>a</sup></b>	<b>1.30 (0.10)<sup>b</sup></b>	<b>3.05 (0.15)<sup>b</sup></b>

	<b>5.85 (0.36)<sup>a</sup></b>	<sup>b</sup>
	<b>14.54 (0.57)<sup>a</sup></b>	<sup>b</sup>
	<b>1.75 (0.24)<sup>a</sup></b>	<sup>b</sup>
	2.05 (0.18)	<sup>b</sup>
	2.96 (0.24)	<sup>b</sup>
	3.96 (0.27)	<sup>b</sup>
	6.08 (0.34)	<sup>b</sup>
	<b>7.03 (0.32)<sup>a</sup></b>	<sup>b</sup>
	<b>2.41 (0.22)<sup>a</sup></b>	<sup>b</sup>

# Remember the Shift!



# Resources

**CWC** [www.snocochildrenswellnesscoalition.com](http://www.snocochildrenswellnesscoalition.com)

**Kernels:** <http://promiseneighborhoods.org/kernels/>  
Or  
[http://bit.ly/embry\\_kernels](http://bit.ly/embry_kernels)

**ACES:** <http://www.cdc.gov/ace/index.htm>  
Or  
<http://www.cestudy.org/>  
Or  
<http://www.fpc.wa.gov/>  
Or  
<http://www.cestoohigh.com>

**ARC Training:** <http://www.traumacenter.org/research/ascot.php>

