

Adverse Childhood Experiences and the Role of **Substance Misuse Prevention**



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What are Adverse Childhood Experiences?

Adverse childhood experiences (ACEs) are stressful or traumatic events that occur between the ages of 0 and 17.¹ ACEs can undermine a child's sense of safety, stability, and bonding, and can have effects that persist for years.²

ACEs are strongly associated with a wide range of health problems that can persist throughout a person's lifespan, including an increased risk of substance misuse, serious emotional disturbances, and mental health disorders. The more ACEs a person has, the greater the risk for negative outcomes. In addition, epigenetics research shows that the trauma associated with ACEs can be passed down from generation to generation. For these reasons, addressing ACEs is critical to developing healthier people and stronger communities.

The substance use prevention field can play a vital role in helping to address the risk factors and prevent the harms associated with ACEs and provide support for building protective factors against these harmful experiences.



The Scope of ACEs

5 OF THE TOP 10

leading causes of death relate to ACEs.¹¹



61%

of adults experience at least one ACE in their lifetime.^{3,4}



1/4

The most common ACEs are parental separation and economic hardship, with 1/4 of children experiencing at least one of these events.^{7,8}



45%

of children experience at least one ACE.³

4+ ACEs

Females and racial/ethnic minorities are at greater risk for experiencing 4+ ACEs.^{9,10}



1 in 6

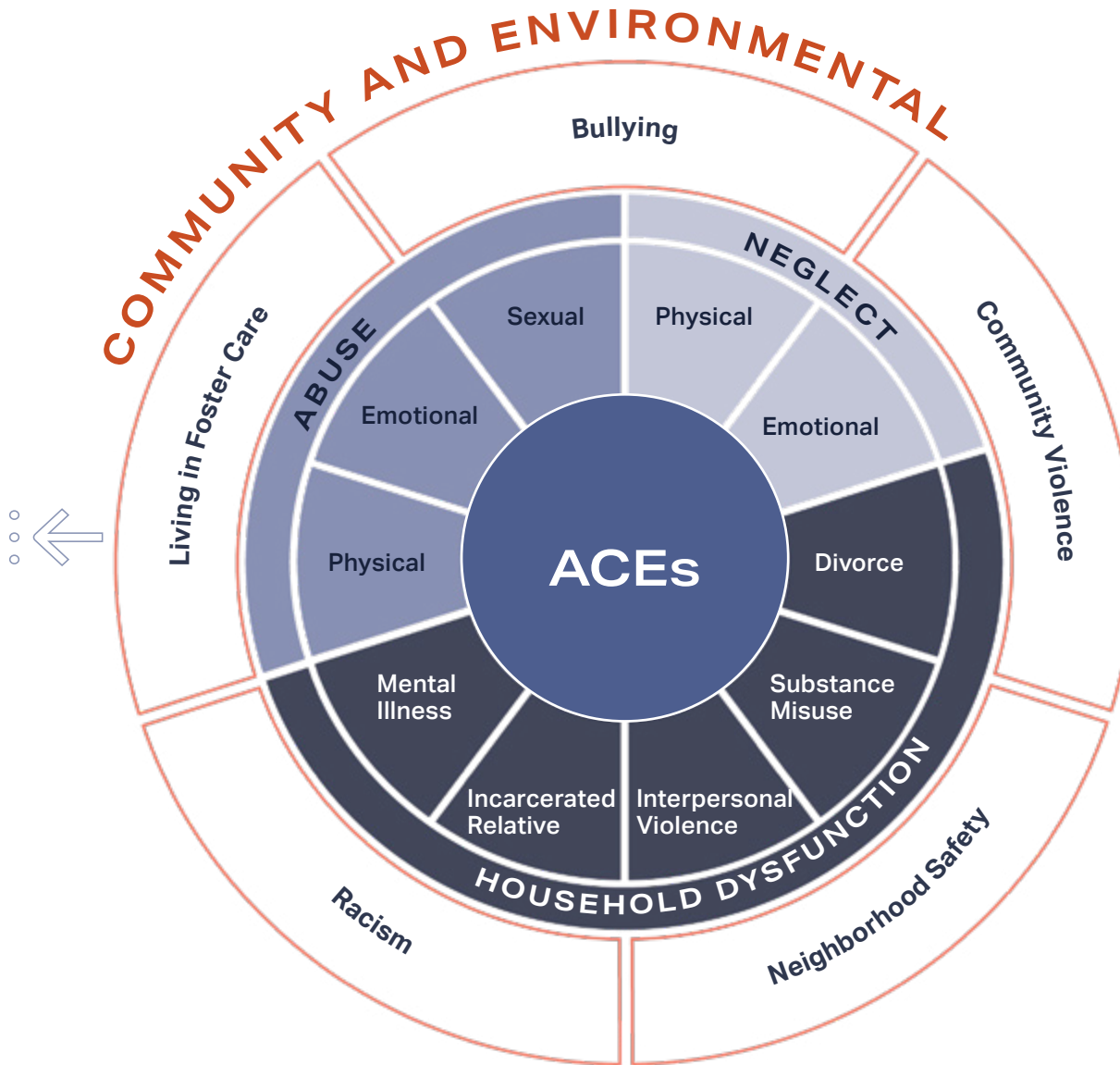
adults (16%) report experiencing 4+ ACEs in their lifetime.^{5,6}



Types of ACEs ^{12 13 14}

- **ABUSE:** Physical, Emotional, Sexual
- **NEGLECT:** Physical, Emotional
- **HOUSEHOLD DYSFUNCTION:** Mental illness, Interpersonal or family violence, Incarcerated relative, Divorce, Substance misuse
- **COMMUNITY AND ENVIRONMENTAL:** Racism, Bullying, Discrimination, Poverty or homelessness, Community violence, Living in foster care, Experiences of being an immigrant, Involvement with the criminal justice system, Witnessing or experiencing acts of terrorism, Attending a school that enforces a zero-tolerance discipline policy, Natural disasters

ACEs can be prevented. People who have these experiences can also build resiliency, heal their trauma, and work towards recovery.^{15 16} Because ACEs are common and strongly related to many substance use and behavioral health outcomes, identifying and reducing the trauma of ACEs can have a significant impact on people's social, emotional, and physical wellbeing, and on their economic security.



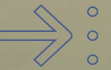


What are Protective and Compensatory Childhood Experiences?

Protective and compensatory childhood experiences (PACES) are positive experiences during childhood that can lessen the negative effects of ACEs. PACEs protect against harm, including mental or physical illness. Research shows that adults with many PACEs are healthier—physically, mentally, and emotionally—than adults with fewer PACEs, regardless of their ACEs. PACEs also buffer against intergenerational transmission of ACEs.^{17 18 19 20 21}

Types of PACEs²²

- **SUPPORTIVE RELATIONSHIPS:**
Unconditional love from a caregiver or parent,
Having or spending time with a best friend,
Volunteering in the community or helping
others, Being part of a social group, Having a
mentor outside of the family
- **ENRICHING RESOURCES:**
Living in a safe home where needs are met,
Quality education, Having a hobby, Physical
activity, Fair rules and routines at home



The Impact of ACEs^{23 24 25 26}

ACEs can increase the risk for disease and early death, as well as affect a person's ability to thrive socially and economically.



CHRONIC HEALTH CONDITIONS:

Coronary heart disease, Stroke, Asthma, Chronic obstructive pulmonary disease, Cancer, Kidney disease, Diabetes, Obesity, Stroke, Broken bones

MENTAL HEALTH CONDITIONS:

Depression and suicidal thoughts or behaviors

HEALTH RISK BEHAVIORS:

Smoking, Heavy drinking or alcoholism, Unprotected sex, Lack of physical activity

ANTI-SOCIAL BEHAVIOR:

Future violence victimization or perpetration, Difficulty forming healthy and stable relationships

ECONOMIC ROADBLOCKS:

Lower graduation rates and academic achievement, Missing work, Financial struggles, Unemployment

People with **4** or more ACEs are:^{27 28}



12x more at risk for suicide

7x more likely to develop alcoholism

4x more likely to develop depression

2-4x higher risk of using alcohol or other drugs

2-4x more likely to begin substance use at a young age

2x higher rate of heart disease or lung cancer

People with **5** or more ACEs are:^{29 30}



7-10x more likely to use illicit substances

7-10x greater risk for illicit substance use addiction

7-10x more likely to inject illicit substances

3x higher risk for misuse of prescription pain medications





Disparities within ACEs

Some children are affected disproportionately by ACEs due to the social, structural, and political contexts in which they grow up. For example, discriminatory practices and behaviors lead to undue stress on families of color raising young children.

Decades of research on ACEs has shown that:

- Lower socioeconomic status increases the probability of experiencing an ACE, as well as having a higher number of ACEs.
- Gay and bisexual individuals experience a higher number of ACEs compared to heterosexual individuals.³¹
- Women are more likely than men to report higher numbers of ACEs.³²
- Children who experience one ACE face an increased risk of experiencing other ACEs.³³



ACEs are more prevalent among racial or ethnic minority groups



Other variables can also further influence the effects of ACEs. For instance, White children generally have fewer ACEs than other children. However, White children who are economically disadvantaged report more ACEs than Black or Hispanic children from the same economic group.³⁷

There are also disparities in what kinds of ACEs people can experience. Women report more experiences with emotional abuse, childhood sexual abuse, and living in a household with a family member who had a mental health or substance use issue compared to men. Conversely, men report experiencing more bullying and community violence.³⁸





ACEs and Toxic Stress

Not all stress is harmful. In fact, most people experience some stress or adversity in their lives, and these experiences can actually help build healthy coping strategies. But the ongoing and repeated stressors that occur because of ACEs are not productive, and often lead to the development of toxic stress.³⁹ Toxic stress can deeply damage a person's body and brain. This risk is particularly acute for children, who are undergoing a critical time in their growth and development.^{40 41 42} A buildup of toxic stress can lead to or worsen the negative consequences associated with ACEs. Children who experience many ACEs are more likely to develop toxic stress.^{43 44 45}

The Three Types of Stress⁴⁶

1

POSITIVE

Normal brief physical response to a tense situation or event, such as job interviews or taking a test

2

TOLERABLE

Stress response to a long lasting or severe situation or event, such as loss of a loved one or caring for a sick family member

3

TOXIC

Extended or excessive stress response to frequent and intense situations or events, such as prolonged abuse or witnessing domestic violence



Sustained activation of the body's stress response can negatively affect those areas of the brain that govern how people make decisions, process information, and regulate emotions.⁴⁷ Toxic stress can lead to negative genetic changes, which can be another source of intergenerational transmission of ACEs.⁴⁸

Toxic Stress and the Brain^{49 50}

- **STRESS PATHWAYS:** Anxiety, depression, and impaired learning and memory
- **CONNECTIVITY:** Difficulty understanding the significance of situations and determining the appropriate response
- **EMOTIONAL PROCESSING AND REGULATION:** Hypervigilance and reduced ability to pay attention
- **REWARD MECHANISMS:** Damaged pleasure and rewards center can lead to difficulty experiencing joy
- **DISINHIBITION:** Difficulty with impulse control



What Substance Use Prevention Can Do to Address ACEs

Substance use prevention professionals can support efforts to minimize ACEs and promote PACEs by selecting and implementing best-fit, evidence-based, and scalable programs and policies that affect adverse childhood experiences.^{51 52} These include efforts to strengthen economic supports, develop healthy skills, and engage youth in the community. Additional information is available through the [Substance Abuse and Mental Health Services Administration](#).

A comprehensive strategic planning process, such as SAMHSA's Strategic Prevention Framework (SPF), can aid in these efforts. The SPF's five steps support the identification and implementation of appropriate strategies that address substance use risk and protective factors, including ACEs and PACEs. When engaging in strategic planning, prevention professionals should also take steps to incorporate cultural competency and humility into their work. Through these efforts, prevention professionals can better address disparities and advance health equity by understanding and honoring the contexts within which they are working.^{53 54}



Incorporating ACEs and PACEs Into the SPF



ASSESSMENT

Collect state- and local-level data on ACEs and PACEs to inform decision-making.

Expand data collection instruments to include ACEs and PACEs indicators.

Use ACEs data to identify populations at higher risk for substance use disorders and potentially in need of prevention services.



CAPACITY

Increase awareness of ACEs and PACEs among state- and community-level prevention professionals.

Emphasize the relevance of ACEs and PACEs among behavioral health partners.



PLANNING

Include ACEs and PACEs among the primary risk and protective factors considered when planning prevention efforts.



IMPLEMENTATION

Select and implement programs and strategies that address ACEs and encourage PACEs, including efforts to reduce intergenerational transmission of ACEs



EVALUATION

Continuously evaluate intervention processes and outcomes and refine implementation to better address ACEs and sustain PACEs.

Analyze and publish findings to build the ACEs and PACEs research base.



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SPTAC is a national training and technical assistance system dedicated to advancing the application of culturally responsive, evidence-informed substance misuse prevention programs guided by SAMHSA's Strategic Prevention Framework.

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