



Background on Trauma Research Brief

Trauma is much more prevalent than we would like to recognize, and as educators we are in a position to support children who have faced distressing or disturbing events. How do we define trauma? *Trauma* is an exceptional experience in which powerful and dangerous events overwhelm a person's capacity to cope (Rice & Groves, 2005). Peterson (2014) defines trauma as an event or events that involve actual or threatened death or serious injury to the child or others, or a threat to the psychological or physical integrity of the child or others. It's important for us to address trauma because recent research from the Substance Abuse and Mental Health Services Administration (SAMHSA, 2017) indicates it is more common than one might think:

More than two thirds of children reported at least one traumatic event by age 16, according to SAMHSA.

Some researchers are suggesting that childhood trauma should be viewed as a public health crisis. Over a period of 22 years, researchers followed 1,420 children from mostly rural parts of North Carolina. Researchers collected and began to analyze data while the participants were children and their recollection of details of their experiences was clear. Nearly 31% of the children told researchers they had experienced one traumatic event like physical or sexual abuse, or had witnessed or overheard a loved one's traumatic experience (Copeland et al, 2018). Furthermore, 22.5% of participants had experienced two traumas, while 14.8% experienced three or more (Copeland et al., 2018).

In addition to causing learning and/or behavior problems in youth, trauma can have

a significant, long-term impact on a child's adult life. Copeland et al. (2018) found that participants who experienced trauma in childhood were 20% more likely to develop depression or substance abuse. Participants with histories of trauma were also more likely to experience health problems, struggle financially or be involved in violent relationships.

Because of these overwhelming statistics, it's important for us as educators to be informed regarding adverse childhood experiences (ACEs), the types of trauma that can cause them, and the myriad effects ACEs can have on children today and into adulthood, if not addressed.

Adverse Childhood Experiences (ACE) Study

The Adverse Childhood Experiences (ACE) Study explains how childhood abuse, neglect and other traumatic experiences can have an effect on well-being in adulthood. The original study, led by Vincent Felitti, M.D. and Robert Anda, M.D., was conducted in the mid-1990s by the Centers for Disease Control and Prevention and Kaiser Permanente. Over 17,000 people who were given physical exams at the San Diego Health Appraisal Clinic were asked to complete a confidential survey regarding their childhood experiences (up to age 18) and their current health status and behaviors. The results of the survey and their physical exam were combined to form the study's findings.

The CDC-Kaiser ACE study questions were developed from a number of published surveys, such as the following:

- Conflicts Tactics Scale
- 1988 National Health Interview Survey
- Behavioral Risk Factor Surveys





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- Third National Health and Nutrition Examination Survey
- Diagnostic Interview Schedule of the National Institute of Mental Health (NIM)

From these surveys, 17 questions were developed and organized for the ACE Study that measured 10 types of childhood trauma. The ACE Study was broken down into three major trauma categories (abuse, neglect and household dysfunction), with each including subcategories.

ACE Study Categories of Trauma
<p>Abuse <i>experienced by person completing the questionnaire</i></p> <ul style="list-style-type: none"> • Physical • Emotional • Sexual
<p>Neglect <i>experienced by person completing the questionnaire</i></p> <ul style="list-style-type: none"> • Physical • Emotional
<p>Household Dysfunction <i>related to other family members</i></p> <ul style="list-style-type: none"> • Having an incarcerated relative • Having a family member diagnosed with mental illness or depression • Having a family member with substance addiction or alcohol addiction • Witnessing domestic abuse of a mother • Losing a parent to divorce, separation or other reasons

There are many other types of childhood trauma — witnessing a sibling being abused, community violence, homelessness, food insecurity, being the victim of racism, or being bullied by a classmate — but only the 10 types listed above were measured because these were identified as the most common by a group of about 300 Kaiser members. While they provide a useful marker for the severity of trauma experienced, other types of trauma may have similar impact.

Participants of the study were assigned an ACE score to reflect the number of adversities experienced in childhood from the above listed 10 categories. Each adversity counts as one, no matter how many times it occurred. The study found that as the total score indicating the amount of stress during childhood increased, so did the risk for other related health problems in adulthood. Key findings from this seminal research study are listed below.

Key Findings of ACE Study
<ul style="list-style-type: none"> • Participants with an ACE score of more than 4 were at increased risk for cancer and heart disease. • Five or more ACEs signified that an individual was eight times more likely to become an alcoholic than participants with a score of 0. • Participants with an ACE score of 6 or higher have a shortened lifespan by an average of 20 years. • Given exposure to one trauma category, there was an 80% likelihood of exposure to at least one other.

This study found a correlation between early life adversity and well-known killers like heart disease and cancer (Harris, 2018). People with ACE scores above 0 are more likely to be violent, have more accidents, sustain more broken bones, use more drug prescriptions, be diagnosed with depression, and suffer from autoimmune diseases (Anda et al., 2005). Further difficulties could very likely include creating and maintaining relationships, engaging in healthy life choices, and obtaining and sustaining employment (see www.acestudy.org). More important, this study revealed that it is not necessarily the intensity or duration of these events, but the variety or number of adverse experiences, that is linked to potential harmful outcomes for adults (Peterson, 2014; Blaustein & Kinniburgh, 2010).





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There have been further recent studies that have confirmed that trauma in infancy and childhood shapes healthy brain development, learning and behavior, and these changes can have a huge impact on adulthood mental and physical health. One study conducted by Banihashemi, Sheu, Midei, and Gianaros (2015) revealed that physical abuse in early childhood can effectively misalign communication between critical areas of the brain that control the body, predisposing adults to cardiovascular disease and mental health problems.

Another study found that extreme stress during childhood due to poverty, neglect and physical abuse can alter the brain, including the region responsible for processing stress and emotion. Researchers in this study (Birn, Roeber, & Pollak, 2017) contrasted images of the brains of children who had experienced trauma with those of children who had not. The findings showed that children who experienced any of the three types of early life stress had smaller amygdalas (the part of the brain responsible for emotion and stress processing) than children who had not. Children who lived in poverty and children who had been physically abused also had smaller hippocampal volumes (another part of the brain involved in emotion and stress). In light of this, there are questionnaires available today to assess and determine someone’s ACE score. A few questions from the ACE study are listed below. It’s important to note that the ACE score is meant as a guide. As mentioned earlier in this document, other types of toxic stress or trauma could also place a person at risk for health, cognitive and psychological consequences. ACE questions can be found on the ACESTooHigh website at <https://acestoohigh.com/got-your-ace-score/>.

Sample ACE Questions

Prior to your 18th birthday:

- 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?

No ____ If Yes, enter 1 ____
- 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?

No ____ If Yes, enter 1 ____
- Were your parents ever separated or divorced?

No ____ If Yes, enter 1 ____

Complex Trauma and Types of Trauma

One term that has appeared frequently in recent literature is *complex trauma*. Complex trauma encompasses children’s exposure to multiple traumatic events and the wide-ranging long-term effects of this exposure. These events can occur early in life and continue throughout a child’s development, often within specific relationships and contexts. Trauma in the form of neglect, such as the lack of proper support by the caregiver, can deprive a child of forming healthy, secure attachments. Because many aspects of a child’s physical and emotional development rely on a caregiver as the primary source for safety and stability, anything that threatens that adult, or the child’s attachment to that adult, can result in complex trauma to the child.

There are major types of trauma, some of which have already been discussed. Sexual assault; child maltreatment including neglect, physical, sexual and emotional abuse; and domestic abuse were all mentioned previously as well as in the ACE Study. Other traumas could include the following:





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1. *School and community violence*, which might entail destructive violence or personal conflicts between people who are not family members, or crimes like shootings, rape and robbery.
2. *War-related trauma* can include refugee and war zone trauma, terrorism and combat-related trauma. Refugee trauma results from living in a region affected by bombing and/or shooting and displacement by war or political motivation. Combat-related trauma can include witnessing military personnel engaging in warfare with exposure to death and threats to life and/or experiencing fear or horror.
3. *Medical trauma* can result from chronic illness, medical procedures and/or medical treatments of the child or a close family member.
4. *Natural disaster trauma* can result from any natural catastrophe, like a hurricane, tornado, or earthquake. Especially physical damage demanding that local, state or federal agencies be engaged, with potential displacement or homelessness, could be scarring to a child.

(Adapted from TeachTrauma; see <http://www.teachtrauma.com/information-about-trauma/types-of-trauma/>).

Effect of ACEs on Education

We now know from the plethora of research that trauma is prevalent in the lives of children, and the effects can last a lifetime. We know that trauma affects learning and school performance and causes grave physical and emotional anguish. Children and teens can still feel hopeless, unhappy, stuck, lost or unsafe even once everything is

supposed to be better and different. Children can also feel a lot of pressure and shame, and even more so when adults are impatient or frustrated by the child's behaviors.

Now that we understand some of the biology and many of the effects trauma can have on children, the question becomes "How can we best help them in education?" Before- and afterschool professionals have an important role to play in meeting the social and emotional needs of children. In this population especially, educators have the power to instill resilience and determination that will have a lasting, positive impact on children.

The Y4Y Introduction to Trauma-Informed Practices mini-lesson will be asking you to consider these areas in which to develop your own strategies:

- Programs need to be created that are sensitive to the needs of children who have experienced trauma.
- Children need to feel safe so that they are able to learn. We will need to use strategies that will work with them and their neurological differences.
- We need to be sure all staff have a general understanding of children's dysregulated stress systems.
- We need to change school culture and climate (including before- and afterschool programs) and teach important skills like determination and resilience.
- We need classroom strategies to support trauma-impacted students learning reading, writing and math skills.
- We need to consider the ways in which educators are affected by teaching and treating children of

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trauma and the effects this can have on their own emotional well-being.

- Educators need to be further trained in self-care strategies.

Empowering change by observing the unique social and educational needs of students impacted by trauma, helping them build their determination and resilience, and fostering a peer environment where patience with their differences is readily granted can lead these very special students to an eventual mastery of skills and productive and healthy lives.

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