

BECOMING TRAUMA INFORMED

Adverse Childhood Experiences (ACEs) and Trauma: Implications for Schools

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Becoming Trauma Informed

Adverse Childhood Experience and Trauma: Implications for School

The National Comprehensive Center

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The purpose of this document is to briefly introduce the research on Adverse Childhood Experiences (ACEs) and trauma and their relevance to schools.

What are ACEs?

ACEs are acute or chronic events that threaten the child's physical or emotional well-being. Originally used in the landmark [CDC/Kaiser Permanente Study](#) (Felitti et al. 1998), the term "Adverse Childhood Experiences (ACEs)" refers to experiences of abuse, neglect, parental divorce, mental health, substance abuse, incarceration and death of a parent or guardian, by children and adolescents (0-17 years of age) (see Figure 1). Using self-reported data from ~17,000 adults who comprised the predominantly White middle-class urban sample, the study revealed that ACEs were very common, and that these experiences were linked to several major chronic illness, life expectancy, and social problems experienced in the United States.

Since the seminal CDC/Kaiser Permanente Study, ACEs have been expanded to other types of ACEs not included in the list of 10 ACEs in Figure 1, such as racism, bullying in schools (in-person or online), community violence, and environmental events (see Figure 2).

How Common Are ACEs?

Studies show that between 49% and 61% of children in America experience at least one ACE, depending on the definition used and how the data are collected (Bethell et al. 2017; Merrick et al. 2018). In parent reports of children aged 0–17 yrs., where ACEs were defined in terms of household

Figure 1. Types of ACEs

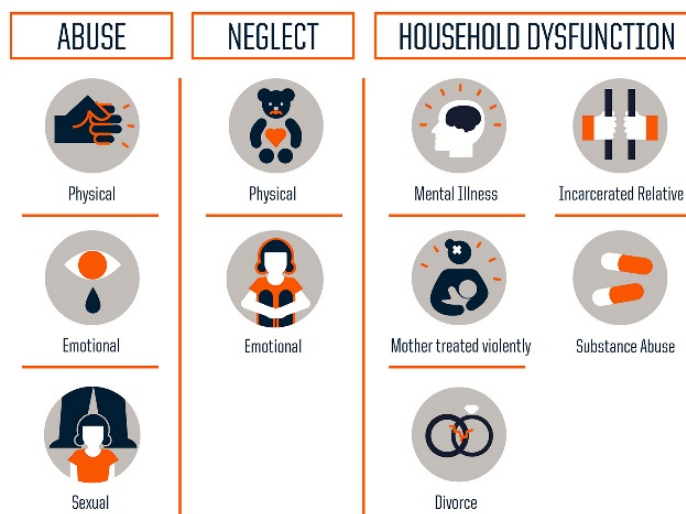
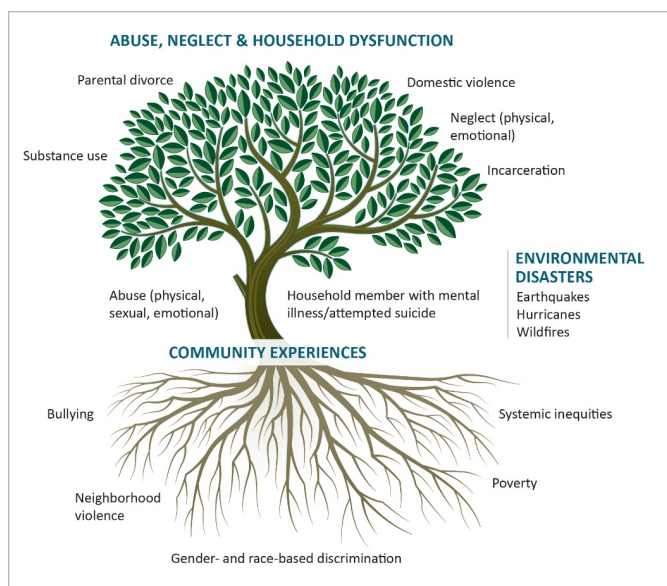


Figure 2. Revised Types of ACEs



Source: Adapted from Ellis and Dietz (2017) and [PACEs Connection](#)

dysfunction, 34 million children — nearly half of all U.S. children — have experienced at least one ACE (see Table 1), with percentages of children affected in individual states ranging from 38.1% to 55.9%. Non-Hispanic black children and youth are more likely than their non-Hispanic white and Hispanic peers to have experienced three or more adverse experiences (63.7% compared to 40.9% and 51.4%, respectively) (see Bethell et al. 2017).

Table 1. National and Across-State Prevalence of ACEs among children and youth

Adverse Childhood Experiences (ACEs)	All Children	Age 0–5	Age 6–11	Age 12–17	Range Across States
Child experienced ≥ 1 ACEs	46.3%	35.0%	47.6%	55.7%	38.1% (MN) – 55.9% (AR)
Child experienced ≥ 2 ACEs	21.7%	12.1%	22.6%	29.9%	15.0% (NY) – 30.6% (AZ)

Experts suggest the impact of current pandemic and social justice issues have increased the incidence of trauma and ACEs, not only in children (CDC 2020¹; NIHCM 2020) but also in adults (Czeisler et al. 2020).²

What Is Trauma?

Trauma is an individual's experience of, and response to, an adverse event in the form of intense reactions that include fear, helplessness, and loss of control. The experience of trauma resulting from ACEs can overwhelm an individual's coping capacity and can have an impact on the individuals' physical, social, and emotional development, and possibly, their day-to-day functioning.

Exhibit 1. Types of trauma

Acute trauma	Describes the response(s) to a one-time, intensely distressful event.
Complex trauma	Describes both children's exposure to multiple and varied traumatic events that often occur within the caregiving systems, and the wide-ranging, long-term effects of this exposure.
Historical trauma	Refers to cumulative trauma experienced by specific cultural, racial, ethnic, or religious groups across generations; often emanating from major negative events, such as such as slavery, the Holocaust, forced migration, and the violent colonization of Native Americans.
Intergenerational Trauma	Refers to the effects of harms that have been carried over in some form from one generation to the next. The concept is similar to historical trauma, although it is frequently used to refer to trauma that occurs within families rather than in larger (e.g., racial, ethnic, cultural) groups.

Source: Cook et al. 2003, Brave Heart and DeBruyn, 1999; Brave Heart et al. 2011.

¹ CDC report (Leeb et al., 2020), showed that compared to 2019, the proportion of mental health–related visits for children aged 5–11 and 12–17 years in 2020 increased approximately 24 percent and 31 percent, respectively.

² National estimates of the prevalence of ACEs in 2020/2021 were not available at the time.

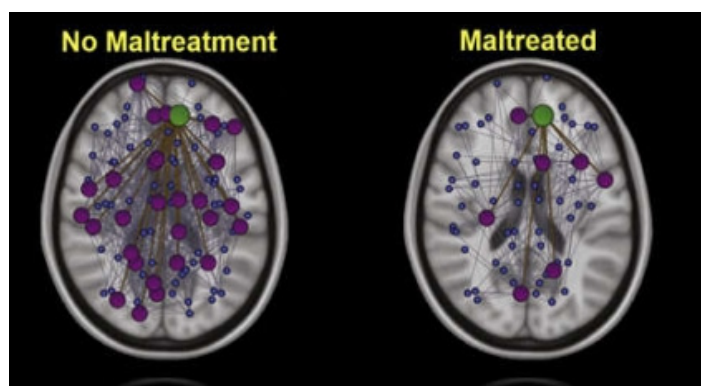


What Is the Impact of ACEs and Trauma on Children and Youth?

Several decades of research has shown that trauma and adversity in childhood have both short- and long-term effects on an individual's health and well-being. When a child experiences frequent and/or prolonged ACEs, the resulting toxic stress response can disrupt the structure and processes of brain functioning and the immune system, and can increase the risk for stress-related disease and cognitive impairment well into the adult years.

Figure 3 shows the results of a study comparing brain connectivity between young adults who had been maltreated as children compared to those who had not been maltreated (Teicher et al. 2014). There are fewer connections among the nine cortical regions in the young adults who experienced trauma (maltreatment). These structural differences could compromise the basic social perceptual skills and ability to self-regulate emotions of the young adults who were maltreated.

Figure 3. Comparison of brain connectivity in young adults



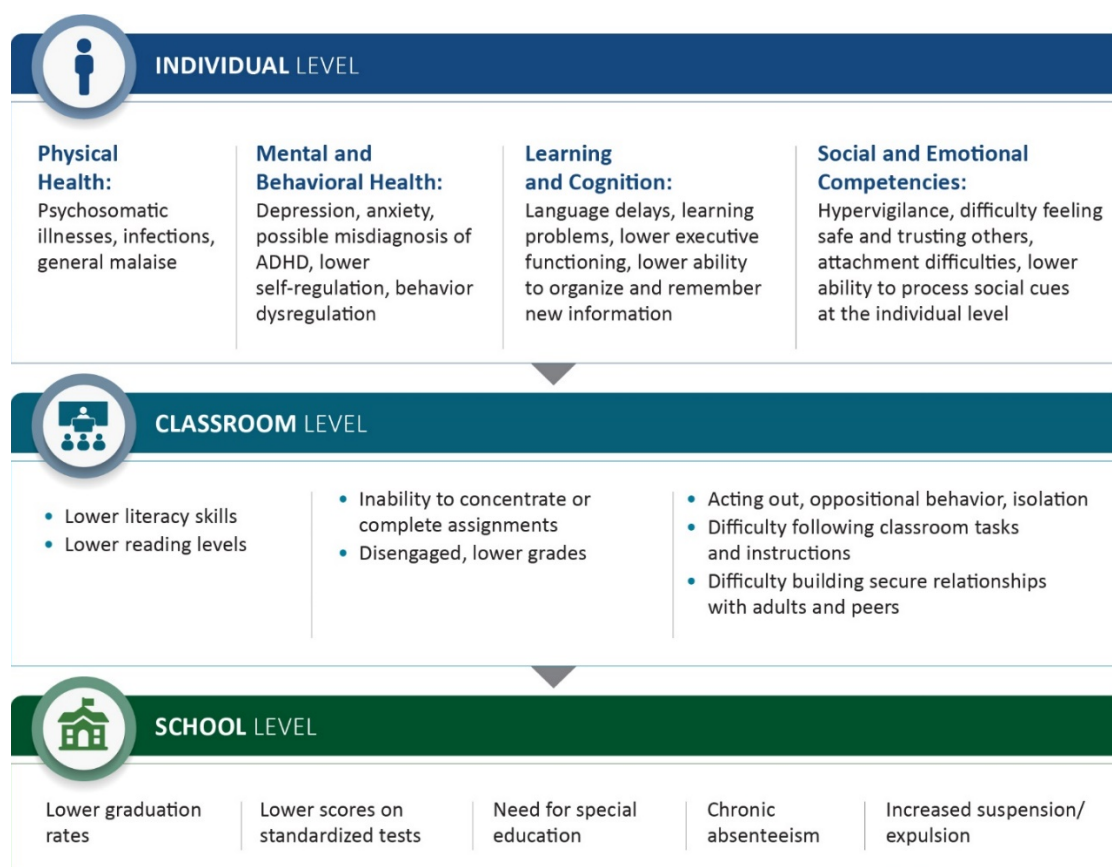
ACEs and trauma can lead to poorer health outcomes in adulthood such as heart disease, stroke, obesity, and mental and behavioral health problems such as depression, substance use, suicide, and even early death (Brown et al. 2009). Furthermore, the greater the number of ACEs, the greater the risk for negative outcomes (Chartier et al. 2010).

What Is the Impact of ACEs and Trauma in the School Setting?

The negative consequences associated with ACEs and trauma are even more apparent within the context of the school environment. Trauma can undermine a child's ability to learn, form relationships, and function appropriately in the classroom (in-person or online). Reading, writing, and solving mathematical problems require attention, memory, decision-making, and regulating anxiety and interest. These are the very same developmental issues that are affected by ACEs and trauma. Students exposed to ACEs have difficulty concentrating and learning, and tend to display emotional dysregulation. In addition, children affected by ACEs may have difficulty with social development, including feeling safe, trusting others, and processing social cues. In a sample of high-risk children at a pediatric clinic in California, children who were exposed to four or more ACEs were 32 times more likely to have learning and/or behavioral problems than their peers with no ACEs (Burke et al. 2011).

As shown in Figure 4, ACEs can manifest at the classroom level in the form of disengagement, acting out, being isolated, and not being able to build secure relationships in school with peers and adults. In turn, these issues can manifest at the school level as chronic absenteeism, higher rates of suspension/expulsion, and lower test scores. School communities with higher prevalence of ACEs had significantly higher rates of suspension and unexcused absences and lower rates of graduation from high school as compared to school communities with relatively low prevalence of ACEs (Blodgett and Dorado 2016).

Figure 4. Potential effects of ACEs on students at the individual level, and classroom and school settings



Why Do We Need Trauma-Informed Practices in Schools?

Schools are the institutions that children have the most direct and long-term access to during their crucial developmental years. Schools have an important role to play in connecting children to caring adults as well as helping them reach their learning goals. A growing body of research identifies health, and positive relationships with caring adults as protective factors for children who have experienced ACEs and trauma and improve

Using trauma-informed approaches in schools shifts the focus from asking, “What is wrong with the student?” to understanding “What has happened to the student?”

developmental outcomes (Bethell et al. 2019). By providing a safe, engaging, and supportive learning environment, schools have the potential to prevent or ameliorate the negative effects of ACEs and trauma for the individual child and foster better engagement for all children regardless of their levels of risk.

In addition, establishing physical, social, and emotional safety, as well as predictability in the classroom environment, can assist teachers and students to focus on teaching and learning. We will explore this topic in Brief # 2.

Resources

- » To learn more about ACEs: <https://www.cdc.gov/violenceprevention/aces/index.html>
- » To see if your state has ACEs data through the Behavioral Risk Factor Surveillance System (BRFSS): <https://www.cdc.gov/violenceprevention/aces/ace-brfss.html>
- » To learn about the prevalence of ACEs across states: <https://www.childtrends.org/publications/prevalence-adverse-childhood-experiences-nationally-state-race-ethnicity>
- » To learn about the different types of trauma: <https://www.nctsn.org/what-is-child-trauma/trauma-types>
- » To learn about trauma-informed approaches in schools: <https://www.nctsn.org/trauma-informed-care/trauma-informed-systems/schools/nctsn-resources>

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