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This Research Brief is published by the National Center on Afterschool and Summer Enrichment (NCASE) to build awareness of research and promising practices in the field of school-age child care.

The goal of NCASE is to ensure that school-age children in families of low income have increased access to quality afterschool and summer learning experiences that contribute to their overall development and academic achievement. For more information, contact us at ncase@ecetta.info.



Adverse Childhood Experiences and the School-Age Population: Implications for Child Care Policy and Out-of-School Time Programs

Adverse Childhood Experiences (ACEs) produce trauma that triggers adaptive behaviors which can disrupt a school-age child's academic and social worlds. Out-of-school time (OST) programs can play a role in mitigation and prevention of ACEs. Often, state policies and initiatives are the catalysts that support OST programs in this critical work.

In recent years, the impact of ACEs on the development of children and youth has been of great concern to educators, social service workers, and other related professionals. In a 2014 research brief, *Child Trends*, a non-profit, non-partisan research center, defined Adverse Childhood Experiences (ACEs) as “potentially traumatic events that can have negative, lasting effects on health and well-being. These experiences range from physical, emotional, or sexual abuse to parental divorce or the incarceration of a parent or guardian.”¹ In addition, research links social determinants such as poverty and racism as potential contributing factors that set the stage for

these experiences, though ACEs can influence the lives of children from any culture or socio-economic background.

Acute (single incident) or complex (chronic, varied and/or multiple incidents) trauma may lead to ACEs. Trauma, or toxic stress, can negatively affect brain architecture and chemistry. Toxic stress elevates the stress hormones, which can have a profound effect on all domains of brain development. Brain impairment, especially in early childhood is startling and can cause cognitive dysfunction that may affect academic performance, coping capabilities, and other vital processes throughout life.

¹ Sacks, V., Murphey, D., & Moore K. (2014, July). Adverse childhood experiences: National and state level prevalence. *Child Trends*. Publication #2014-28. Retrieved from <https://www.childtrends.org/publications/adverse-childhood-experiences-national-and-state-level-prevalence>

ACEs include the following:²

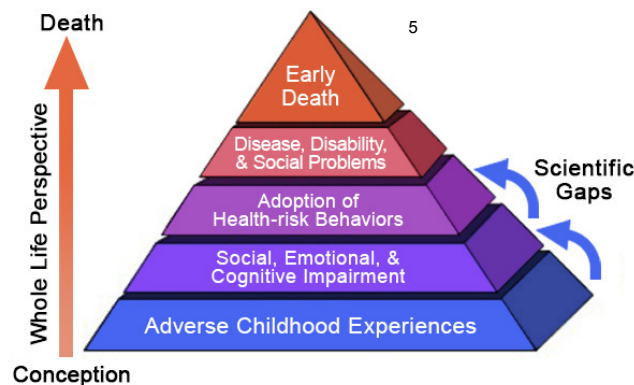
- » Physical abuse
- » Sexual abuse
- » Emotional abuse
- » Physical neglect
- » Emotional neglect
- » Intimate partner violence
- » Mother treated violently
- » Substance misuse within household
- » Household mental illness
- » Parental separation or divorce
- » Incarcerated household member

Global attention to the ACEs phenomenon comes from the original ACEs study, which was a joint venture of the Center for Disease Control and Kaiser Permanente from 1995 to 1997. The study included two intervals of data collection from a combined 17,000 participants and examined how 10 types of childhood trauma (i.e., ACEs) affected long-term health.³ The outcome of the research revealed a cause-effect response relationship between incidents of ACEs and the risk for disease. From this work, there was the development of a 70-item ACEs survey, followed by a 10-item screening questionnaire that has been the catalyst for numerous subsequent surveys. These tools corroborated the occurrence of ACEs and their negative effects on health habits and life outcomes (see illustration).

The effect of ACEs on school-age children

School age—the time of both early and middle childhood—starts at age 5, at the outset of compulsory schooling, and goes to age 13, which marks the onset of puberty. This is a time of gradual yet complex development. The child's evolving social context is an incubator for his or her increasingly sophisticated physical, cognitive, and emotional growth. Major developmental gains that occur during this time span include a shift from concrete to abstract thought, at around nine years of age, and the development of the child's individual identity that progresses throughout the entire age continuum.⁴

Brain development at this age is robust, with neural connections still undergoing pruning, wiring still in progress, the fatty tissues surrounding neurons increasing and assisting with the fine-tuning of electrical impulses, and connections becoming more stable. However, with all this progress, the prefrontal cortex is just entering its maturation phase, which involves the control of impulses and decision-making. Coping with and/or surviving trauma or unsettling, scary experiences with a brain not yet capable of interpreting, processing, and understanding these experiences can result in poor decisions, short attention span, and lack of communication.



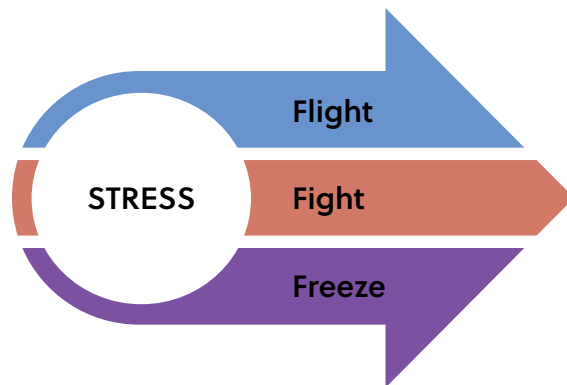
2 Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., . . . Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. *American Journal of Preventive Medicine, 14*(4), 245–258.

3 Whitfield, C. L. (1998). Adverse childhood experiences and trauma. *American Journal of Preventive Medicine, 14*(4), 361–364. Retrieved from <http://www.theanainstitute.org/ACE%20folder%20for%20website/1ACET.pdf>

4 ibid

5 SAMHSA (2018). Retrieved from <https://www.samhsa.gov/capt/practicing-effective-prevention/prevention-behavioral-health/adverse-childhood-experiences>.

While each child is different, interactions and major experiences are the key ingredients in the child's developmental outcomes. The research asserts that, when affected by trauma, the school-age child's brain adapts in ways to support its survival. These adaptations can manifest as behavior problems in a child's everyday settings, including school, and are characterized by flight, fight, or freeze—the stress response framework.⁶



Flight: Withdrawal, escaping, running away, self-isolation, avoidance

Fight: Hyperactivity, verbal aggression, oppositional behavior, limit-testing, physical aggression, “bouncing off the walls”

Freeze: Subdued demeanor, watchfulness, looking dazed, daydreaming, forgetfulness, shutting down emotionally

While the stress response framework is applicable across the age continuum, school-age children have the responsibility of educational and social tasks that may unintentionally provoke these behaviors. The onset of trauma can lead children down a road of school disruption and social disappointment. The use of trauma-informed practices in the context of supportive relationships is key when working with a school-age child who is dealing with trauma from adverse childhood experiences.

Trauma-informed practices and healing-centered engagement

Trauma-informed practices are therapies focused on promoting healing and reducing re-traumatization. These practices, including therapy and counseling, recognize the individual's traumatic experience and regard his or her behaviors as symptoms of the trauma. Awareness of these practices decreases the belief that there is something “wrong” with the individual and increases the emphasis on what happened to the individual and how to support their healing and recovery.

Healing-centered engagement goes beyond trauma-informed practices to separate individuals from their trauma by focusing on what is right with them, and the healthy assets they possess. In addition, this strength-based practice comes from the idea that trauma does not happen in a vacuum, and that well-being arises from participating in changing the circumstances which led to the trauma. Healing-centered engagement seems to be powerful in the fostering of hope, which is vital when recovering from trauma.⁷

Both trauma-informed practices and healing-centered engagement aim for resilience as an end result. Resilience is the ability to adapt to and/or overcome life-changing, traumatic situations. OST programs, as well as school-based programs and other supports, can foster a child's or youth's resiliency by building the individual's (1) capacity and reasonable expectations, (2) positive self-image, (3) problem-solving and communication skills, and (4) management of strong feelings/impulses.⁸

6 Frederiksen, L. (2018, April). The developing brain & adverse childhood experiences (ACEs). ACEs Connection. Retrieved from <https://www.acesconnection.com/blog/the-developing-brain-and-adverse-childhood-experiences-aces>
7 Ginwright, S. (2018, May). The future of healing: Shifting from trauma informed care to healing centered engagement. Retrieved from <https://medium.com/@ginwright/the-future-of-healing-shifting-from-trauma-informed-care-to-healing-centered-engagement-634f557ce69c>
8 American Psychological Association. (n.d.) Road to resilience. Retrieved from <https://www.apa.org/helpcenter/road-resilience.aspx>



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The role of out-of-school time

OST programs are able to promote positive youth development and protect school-age children in large part due to structured activities as well as high-quality interactions, both adult to youth and youth to youth. Organized activities, such as sports, arts, and community service, afford critical opportunities for enrichment and challenge, supportive relationships with adult leaders, positive peer networks, and a chance for choice and voice. In addition, consistent adult supervision, the expectation of regular attendance, and a stable physical location further promote the school-age child's developmental and academic success.

The important role of OST programming and experiences is validated through theories such as Osgood's extension of routine activity theory, and Felson and Cohen's routine activity theory. The extension of routine theory holds that unsupervised time with peers places youth at risk for misbehavior and deviant behaviors due to three dynamics: (1) lack of adult supervision, (2) lack of structure, and (3) the presence of peers who may encourage risky deeds.⁹ There is further validation through the routine activity theory—a crime opportunity theory—that suggests unsupervised time with peers readily connects unsupervised children to inappropriate outcomes, such as illegal activity and substance abuse.¹⁰

OST programs can assist and enhance the lives of children who are dealing with ACEs by providing support in the following areas:

» **Social and emotional development**—Programs that produce positive effects have at least one element of social and emotional-focused programming and/or have professional development for

staff around social and emotional skills. These include positive effects on social behaviors and self-perceptions and a significant reduction of problem behaviors.¹¹ Programs with specified curricula that target the development of social and emotional outcomes, and which include the universal use of trauma-informed practices, were associated with improvements in those outcomes.

- » **Safe zones**—OST programs can provide a safe-haven, and supervised time, instruction, and promotion of new skills, as well as offer opportunities for positive adult interaction and peer interaction. There is potential for programs to reduce juvenile crime and positively influence youth developmental outcomes. According to a 2013 afterschool program poll, 73 percent of parents and 83 percent of participants believe that afterschool program attendance “can help reduce the likelihood that youth will engage in risky behaviors, such as commit a crime or use drugs, or become a teen parent.”¹² Most importantly, these programs keep participants safe during the most vulnerable time of day—3–6 p.m.
- » **Family engagement**—OST programs that work to create an interconnectedness of supports for all program participants, inclusive of the family, acknowledge that engagement of the family unit is crucial to the success of the youth participant. The application of learning-centered approaches leads to families playing a central role as the youth participant's bridge between multiple learning settings and to every learning experience.
- » **Academics**—Participants receive academic instruction for remediation, enrichment, or enhancement purposes within an afterschool or summer learning

9 Osgood, D. W., Wilson, J. K., O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1996, August). Routine activities and individual deviant behavior. *American Sociological Review*, 61(4), 635–655.

10 Finkelhor, D., & Asigian, N. L. (1996). Risk factors for youth victimization: Beyond a lifestyles/routine activities theory approach. *Violence and Victims*, 11(1), 3–19.

11 Gleason, M. M., Goldson, E., & Yogman, M. W. (2016, December). Addressing early childhood emotional and behavioral problems. *Pediatrics*, 138(6).

12 Afterschool Alliance. (2014, February). *Taking a deeper dive into afterschool: Positive outcomes and promising practices* (p. 11). Washington, DC: Author. Retrieved from https://www.afterschoolalliance.org/documents/Deeper_Dive_into_Afterschool.pdf

program environment. The direct benefits of participation can include improved academic achievement in the content areas of focus.

OST programs can integrate trauma-informed practices and healing-centered engagement routines in each of the above-mentioned areas to provide program participants and their families with need-

ed interactions and supports to overcome ACEs and to build resilience. This is especially beneficial when program staff have adequate training and there are proper staffing and referral protocols in place. In addition, there should be established relationships and/or agreements with community-based practitioners for diagnostic and referral purposes.

Spotlight on Tennessee

Tennessee's response to its ACEs profile (released in May of 2015) resulted in a statewide call to action entitled Building Strong Brains: Tennessee's ACEs Initiative, which is a three-prong plan to bring together state departments, public organizations, the private sector, and the community at large. It began with a governor's summit in 2016 and the creation of the Tennessee ACEs Coordinating Team, and led to funding provisions that trained over 865 community educators and advocates who have presented to more than 36,000 people. In addition, there is an annual appropriation of \$2.45 million by Governor Haslam and the Tennessee legislature for innovative projects, programs, and practices to mitigate and prevent ACEs. Some projects to note:

- » **FY 2017**—Tennessee State University's Center of Excellence for Learning Sciences (COELS), housed in the Division of Research and Sponsored Programs, created an online training module to support Building Strong Brains: Tennessee's ACEs Initiative. The training module is housed on the Tennessee Child Care Online Training System (TCCOTS), and it provides participants with the knowledge base to understand key ACEs concepts and strategies to assist children and families.
- » **FY 2018**—University of Tennessee Extension Services developed a "readiness to change" curriculum for preventing and mitigating ACEs and related social-emotional learning (SEL) programs in three

after-school sites for at-risk youth in three rural counties.

These projects support the Building Strong Brains: Tennessee's ACEs Initiative goals (quoted below)¹³:

- » Increase the potential that every child born in Tennessee has the opportunity to lead a healthy, productive life.
- » Raise public knowledge about ACEs.
- » Impact public policy in Tennessee to support prevention of ACEs and to reduce community conditions that contribute to them.
- » Support innovative local and state projects that offer fresh thinking and precise measurement of impact in addressing ACEs and toxic stress in children.
- » Seek sustainable funding to ensure the state maintains a long-term commitment to reduce the impact of adverse childhood experiences.
- » Embrace open, responsive governance through statewide planning groups and the Three Branches Institute, comprised of leadership from the Executive, Legislative and Judicial branches of government, who were invited by the Governor to form a common agenda to advance child welfare and realign the juvenile justice system.

More information can be found at <https://www.tn.gov/tccy/ace/tccy-ace-building-strong-brains.html>.

¹³ Tennessee Commission on Children and Youth. (n.d.). Tennessee building strong brains. Retrieved from <https://www.tn.gov/dcs/program-areas/child-health/aces.html>



Efforts to mitigate and prevent ACEs

The data and research from the original ACEs study provided a framework for states and cities to explore the prevalence of ACEs in their communities and to determine the next steps to reduce the impact of childhood trauma—and the toxic stress it creates—on lifetime outcomes, particularly in education and health. Since 2009, over 30 states and the District of Columbia have conducted ACEs surveys, which identified information similar to the original study.¹⁴ A 2017 non-exhaustive legislative scan of bills conducted by the National Conference of State Legislatures revealed approximately 40 bills in 18 states, with a result of 20 statutes in 15 individual states.¹⁵ A few examples of state and municipality responses to this data follow:

- » **2015**—Wisconsin legislation, in response to the state’s ACEs data, led to the Brighter Futures Initiative, which makes grants available to develop programs to address the prevention and reduction of the following:
 - Youth violence and other delinquent behavior
 - Incidences of youth alcohol and other drug use and abuse
 - Incidences of child abuse and neglect
 - Incidences of non-marital pregnancy
- » **2016**—Missouri enacted the Trauma-Informed Schools Initiative, which requires participation and partnership of the Department of Elementary and Secondary Education (DESE), in consultation with the Department of Mental Health

and Department of Social Services. This initiative provides information on the trauma-informed approach to all school districts, offers training on the trauma-informed approach to all school districts and related programs, and creates a website for schools and parents with information on the trauma-informed approach and a guide for schools to become trauma-informed.¹⁶

- » **2018**—Tennessee Department of Children Services (TDCS), via legislative-sanctioned funding, awarded an innovation project grant to the Boys & Girls Clubs in Tennessee, called Building Blocks. This initiative will train OST professionals, parents, and caregivers to use key strategies, techniques, and programs in providing trauma-informed care and to address the social and emotional needs of youth. OST professionals and caregivers of youth served will develop a comprehensive plan that includes critical information from the training through Building Strong Brains: Tennessee’s ACEs Initiative, toward improving outcomes of youth who have or are at risk of experiencing ACEs.

National, state, and local attention to ACEs via awareness campaigns, data collection, new policies, and supportive services provide opportunities for addressing this phenomenon. The value of OST programs in mitigating and preventing ACEs is evident based on the role these programs have played for decades in the lives of youth and families.

¹⁴ Centers for Disease Control and Prevention. (2015). Behavioral risk factor surveillance system survey ACE data, 2009-2014. Atlanta, Georgia: Author.

¹⁵ Maul, A. (2017, September). State and federal support of trauma-informed care: Sustaining the momentum. Retrieved from <https://www.chcs.org/state-federal-support-trauma-informed-care-sustaining-momentum/>

¹⁶ Missouri Department of Primary and Secondary Education. (2018, December). Trauma-informed schools initiative. Retrieved from <https://dese.mo.gov/trauma-informed>

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