



FOCUS AREA: SOCIAL DETERMINANTS OF MENTAL HEALTH ■ CASE STUDY: BUILDING STRONG BRAINS TENNESSEE

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What is the Building Strong Brains initiative?

Social determinants of health and adverse childhood experiences (ACEs) are two intertwined frameworks for understanding the factors that may lead to childhood adversity and toxic stress, disrupting the architecture of developing brains and influencing later-in-life behavioral, educational, economic, and health outcomes.¹ Building Strong Brains is a statewide effort in Tennessee recognizing the importance of preventing or mitigating ACEs so that the state's children are empowered to lead productive, healthy lives and ensuring the state's future prosperity.² The effort seeks to change the culture of Tennessee so that its overarching philosophy, policies, programs, and practices for children, youth, and young adults reflect the latest brain science on ACEs and the latest communication and storytelling strategies are used to convey that science.³

How was the initiative created?

It was inspired by research gathered as part of the Centers for Disease Control and Prevention (CDC)-Kaiser Permanente Adverse Childhood Experiences Study, one of the largest investigations of childhood abuse and neglect and household challenges and later-life health and well-being.

The study, conducted in two waves of data collection between 1995 to 1997, surveyed more than 17,000 members of Southern California health maintenance organizations about their childhood experiences and current health status and behaviors.⁴ Seven categories of adverse childhood experiences were studied:

1. Psychological abuse
2. Physical abuse
3. Sexual abuse
4. Violence against mothers
5. Living with household members who were substance abusers
6. Living with mentally ill or suicidal household members
7. Living with previously incarcerated family members

Respondents who had experienced four or more categories of childhood exposure were much more likely to have multiple health risk factors (including chronic illnesses, poverty, depression, and addiction) later in life compared to those who had experienced no categories.⁵

Then in 2012, Tennessee included a module of ACEs-related questions in the annual CDC-conducted telephone survey known as the Behavioral Risk Factor Surveillance System (BRFSS) to see how ACEs affect the state's population. The survey of more than 7,000 adults found there were multiple Tennessee counties in which at least 42% of the population had experienced two or more adverse childhood experiences, with emotional abuse, substance abuse, and parental separation or divorce ranking as the most common. Twenty-one percent of Tennesseans had experienced three or more ACEs.⁶

Why was the initiative created and what was it designed to address?

Confronted with the 2012 data and acknowledging that experiencing ACEs multiplied the risk for serious health problems, state policymakers recognized the related health care costs were unsustainable and the toll on community and individual wellbeing was unacceptable. Developmental scientists and public health researchers told the state's then-Gov. Bill Haslam and cabinet members in 2015 that acting on the data would be difficult and involve complex changes to the health, justice, and education systems. Deputy Gov. James Henry called for state departments that serve children to form a public sector steering group that would make sure the science of early adversity was integrated into the work of state government.

The state entered into a collaboration with the Memphis-based ACE Awareness Foundation, the Baltimore-based private philanthropy Annie E. Casey Foundation, and the FrameWorks Institute, a Washington, D.C.-based think tank. The collaboration combined a focus on science and storytelling to frame the data on how adverse early childhood experiences shape life outcomes, educate residents on the lifelong impacts, and instruct educators on how to shield young children from the effects of

traumatic events. The program also helped public officials better understand how public policy and new resources can shape health, wellbeing, and resilience.⁷

The program was designed to address several goals:

- Increasing the potential that every child born in the state has the opportunity to lead a healthy, productive life
- Raising public knowledge about ACEs
- Impacting public policy to support prevention of ACEs and reduce community conditions that contribute to them
- Supporting innovative local and state projects that offer fresh thinking and precise measurement of impact in addressing ACEs and toxic stress in children⁸

How does it work?

The state created public and private sector steering groups and provided multiple rounds of seed funding for community innovations across multiple sectors.

At the heart of Building Strong Brains is a capacity-building public-private partnership that created a team of well-informed, credible messengers who could share the same data-based story and adapt it to their communities. Over the course of several months, 150 state leaders attended lectures focused on the latest scientific research on adverse childhood experiences; examples of programs and policies that other cities and states have deployed to improve education, workforce development, and human services; and practical advice on how to implement and drive evidence-based change in areas like early learning and family services.

The sustainability of the education effort was reinforced by a "train the trainers" initiative designed by the FrameWorks Institute (a social issues-focused think tank) for implementation by the Tennessee Commission on Children and Youth. According to a 2020 report, approximately 1,000 professionals have been trained and in turn have trained more than 40,000 other professionals.⁹



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Who benefits from the program?

Grants have been awarded across the state that serve various populations and expand the capacity within various sectors to incorporate ACEs instruction, including:

- Disadvantaged youth in rural Greene County, where a farm and food education center received support to work with young people who had experienced adversity. As part of the Rural Resources program, youth learn how to raise animals and care for plants, develop social and emotional skills, and gain professional and business development skills.
- Students at Nashville's Belmont University who study nursing, occupational therapy, physical therapy, social work, and public health. The university received funding to develop a core curriculum on child development and trauma that will allow future health professionals in the state to view those factors through a common lens.¹⁰
- Mothers in recovery from substance abuse, who can increase their knowledge and understanding of ACEs and acquire the skills needed to make positive behavioral changes as part of Davidson County's The Next Door Building Healthy Families project.
- Medical students and residents, justice-involved juveniles, and adult counselors in re-entry programs, who can take advantage of the ACE Awareness Wellness and Resiliency Enhancement curriculum through Nashville's Meharry Medical College.¹¹

In order to secure funding, applicants demonstrate understanding of brain science and applied communication science, community appropriateness of their proposal, and the use of an evidence-based or promising practice or strong theory of change as well as address equity, inclusion, and other indicators of cultural competence. Proposals have evolved since the first round of funding alongside contemporary issues, community capacities, administration priorities, and funding availability.¹²

Ultimately, the entire state stands to benefit from efforts to reduce the impact of ACEs. A study found that in 2017, ACEs among Tennessee adults led to an estimated \$5.2 billion in direct medical costs and lost productivity from employees missing work.¹³

How has state government supported the program?

Building Strong Brains is a three-branch initiative.

The governor, first lady, and deputy governor provided extensive public support since the issue was brought to their attention in 2015. In the spring of 2016, then-Gov. Bill Haslam put \$1.25 million in his budget proposal for activities related to adverse childhood experiences. When he left office in 2019, the funding had increased to \$2.45 million and became a recurring budget item.¹⁴

In addition, at least seven state agencies adopted trauma-informed policies and practices, including the departments of Children's Services, Education, Health, Human Services, Mental Health and Substance Abuse Services, and Corrections, along with the Office of Criminal Justice Programs.

The state legislature has conducted numerous hearings on the initiative and adverse childhood experiences and trauma more broadly. Lawmakers have provided recurring funding, participated in regional convenings to increase public awareness, and enacted new laws focused on various elements of adverse childhood experiences. These include measures to create safe baby courts (providing compassionate judicial interactions for children ages birth to four-years-old who have experienced traumatic events) and develop educational training programs, trauma-informed discipline policies for schools, and training for parents going through divorce about the impact on their children.

In-kind assistance from the Administrative Office of the Courts allowed all juvenile court judges in the state and their magistrates and staff to receive training on adverse childhood experiences. The courts also have developed policies and practices to advance healthy environments for vulnerable Tennessee youth.¹⁵

What is the evidence that the program has been successful?

Building Strong Brains has funded more than 35 projects designed to improve outcomes for children and communities. These projects have trained educators, police officers, and community workers to provide leadership in preventing and addressing early adversity and to apply their knowledge to enabling policy change.¹⁶

As noted above, each program to receive funding as part of the initiative was required to use an evidence-based or promising practice or strong

theory of change.¹⁷ Many also require the collection of data.¹⁸ Given the cumulative approach of the overall initiative and the nature of ACEs, gauging Building Strong Brains' ultimate success may require multiple longitudinal, multi-generational studies over time. But proponents point to its adherence to the latest science on brain architecture and the focus on evidence-based practice for component programs as signs the initiative is well on its way to having a positive impact.¹⁹

What can that success be attributed to?

The success of the program has been attributed to its collective impact approach. It engaged champions across the three branches of government, foundations, and community organizations; encouraged public-private collaboration; empowered communities to act and innovate; focused on creating culture change; highlighted evidence-informed messaging; and attracted sustainable resources.²⁰

What challenges does the program face going forward?

Then-Deputy Gov, James Henry, whose call to action led the charge to create the Building Strong Brains initiative, told a legislative committee in 2019 the state still needed to further engage businesses to recognize the return on investment of supporting early childhood services, create strong indicators of outcomes that they are moving the needle on reducing trauma and the impact of adverse childhood experiences (most of the outcome measures they have so far are "process outcomes"), and reduce the community conditions that contribute to ACEs.²¹

Endnotes

- ¹ Marcie Ward, RN, and Cynthia Morrison, RN, "[Pediatrics: Decreasing the Impact of Social Determinants of Health and Adverse Childhood Experiences](#)," The Doctors Company, December 2020.
- ² "[Building Strong Brains: Addressing Adverse Childhood Experiences in Tennessee](#)," Tennessee Department of Children's Services.
- ³ Richard Kennedy, Associate Director, Tennessee Commission on Children and Youth, "[Building Strong Brains Tennessee](#)," Powerpoint presentation.
- ⁴ "[Violence Prevention: CDC-Kaiser ACE Study](#)," Centers for Disease Control and Prevention.
- ⁵ Vincent J. Felitti MD, FACP, Robert F. Anda MD, MS, et al. "[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, May 1, 1998.
- ⁶ "[Adverse Childhood Experiences in Tennessee: Fact Not Fate](#)," Tennessee Department of Health, May 2015.
- ⁷ "[Building Strong Brains in Tennessee](#)," Frameworks Institute, October 2020.
- ⁸ Richard Kennedy.
- ⁹ "[Building Strong Brains in Tennessee](#)," Frameworks Institute.
- ¹⁰ Ibid.
- ¹¹ "[ACEs Projects Funded for FY20](#)," Building Strong Brains Tennessee, July 2019.
- ¹² "[A Case Study of Building Strong Brains Tennessee: An Initiative to Address Adverse Childhood Experiences and Become a Trauma-Informed State](#)," National Governors Association and Duke University Margolis Center for Health Policy, March 2021.
- ¹³ Courtney Melton, "[The Economic Cost of ACEs in Tennessee](#)," The Sycamore Institute, February 1, 2019.
- ¹⁴ "[Building Strong Brains in Tennessee](#)," Frameworks Institute.
- ¹⁵ "[A Case Study of Building Strong Brains Tennessee...](#)" National Governors Association, March 2021.
- ¹⁶ "[Building Strong Brains in Tennessee](#)," Frameworks Institute.
- ¹⁷ "[A Case Study of Building Strong Brains Tennessee...](#)" National Governors Association, March 2021.
- ¹⁸ "[ACEs Projects Funded for FY20](#)," Building Strong Brains Tennessee, July 2019.
- ¹⁹ "[A Case Study of Building Strong Brains Tennessee...](#)" National Governors Association, March 2021.
- ²⁰ Ibid.
- ²¹ James Henry, "[Building Strong Brains Tennessee: A Synopsis of Benchmarks and Major ACEs-Related Activities](#)," Presentation to Committee on Oversight and Reform, July 11, 2019.

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