

BUILDING STRONG BRAINS
TENNESSEE'S ACEs INITIATIVE

**ALL CHILDREN EXCELLING:
AN ADVERSE CHILDHOOD
EXPERIENCES TOOLKIT
FOR HIGHER EDUCATION**



Introduction

The purpose of this toolkit is to provide a resource for faculty to integrate current information about Adverse Childhood Experiences (ACEs) into their curriculum. The intent is for students to be equipped with information on ACEs so that they can mitigate and prevent the effects of ACEs in their future professions as they interact with children and families. This toolkit provides faculty with recommended resources, lesson plan outlines, in-class and out-of-class assignment suggestions, and visual aids to use in their classrooms.

Integration Recommendations

This toolkit contains five lesson plan Modules that address various topics relating to Adverse Childhood Experiences. Module I provides an overview of ACEs, while Modules II through IV address deeper and more complex topics. Module V provides topics that are specialized for particular disciplines: Community and Public Health, Early Childhood Development, Elementary and Special Education, Public Policy, and Library Sciences. In addition, this toolkit includes a USB drive containing an excel sheet of resources used in the toolkit as well as other helpful information.

These modules are designed to be easily integrated into almost any higher education classroom, across a broad range of disciplines. Faculty are encouraged to review the toolkit, reflect on their particular course offerings, and select lesson plans that fit naturally into the subject matter already existing in their curriculum. The Module I lesson plans can be used individually for a brief topic overview, or they can be combined with more complex topics found in the later modules for a longer lesson plan that provides opportunity for a more in-depth experience for students.

The Center for Health and Human Services has additional resources at their offices that are available to MTSU faculty for use in conjunction with the toolkit. CHHS has copies of the Brain Architecture Game available for classroom check out. If faculty interested in showing the movies “Resilience” or “Paper Tigers” as part of their toolkit integration, you may reserve the DVD through the Center. Please contact Sarah Gwinn at 615-494-8986 or sarah.gwinn@mtsu.edu for more information about these additional resources.

Acknowledgements

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BUILDING STRONG BRAINS
TENNESSEE'S ACEs INITIATIVE

Module I: Adverse Childhood Experiences Overview

1 What is an Adverse Childhood Experience, Adverse Community Experience, an ACE Score, and Why Does it Matter?

4 Types of Stress

8 Personal Trauma

10 Community Trauma

13 “What Happened to You?” Instead of “What’s Wrong with You?”

16 Resilience

Module II: Brain Architecture

25 Toxic Stress Changes the Brain Architecture

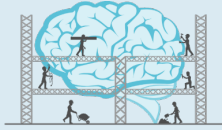
27 Serve and Return

30 Emotional and Behavioral Changes as a Result of Toxic Stress

32 Developmental Delays Associated with Toxic Stress and ACEs

34 How to Counteract Toxic Stress

35 Brain Plasticity



BUILDING STRONG BRAINS
TENNESSEE'S ACEs INITIATIVE

Module III: Individual Trauma Impact

- 43 Childhood Trauma as Personal Trauma

- 47 Childhood Trauma as Family Trauma

- 52 Other Kinds of Childhood Trauma

Module IV: Community Trauma Impact

- 65 Adverse Community Experiences

- 68 Epidemiology of Violence and its Relationship to ACEs

- 70 Long-Term Impact of ACEs on Health

- 72 Economic Consequences of Populations with High ACE Prevalence

- 73 Policy as a Tool to Prevent or Create Trauma

Module V: Implications for Practice

- 79 HLTH: ACEs as a Public Health Crisis: The Social Determinants of Health

- 80 HLTH: Becoming Trauma Informed

- 81 EDU: Becoming Trauma Informed

- 84 EDU: Tennessee State University ACEs Infusion Guide

- 85 Federalism and ACEs: Government Information Resources

- 89 Public Policy Agenda: Stakeholder Salience

- 93 LIBS 6000: Trauma-Informed Libraries

Module I. Adverse Childhood Experiences Overview

This Module Will:

- Provide a definition of Adverse Childhood Experiences, Adverse Community Experiences, discuss the ACEs Survey, and the ACEs Score.
- Present the concept of “Toxic Stress” and how it differs from “Tolerable Stress” and “Positive Stress.” This will begin a conversation of how these different kinds of stress can impact the brain architecture in children.
- Briefly introduce the “Pair of ACEs” with Personal Trauma and Community Trauma.
- Challenge the perception that there are “bad kids.” Change the question from “What’s wrong with you?” to “What happened to you?”
- Present the concept of “Resilience,” showing that a high ACE score does not limit a child’s potential, especially when given proper support.



BUILDING STRONG BRAINS
TENNESSEE'S **ACEs** INITIATIVE

Lesson Plans

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- 1** What is an Adverse Childhood Experience, Adverse Community Experience, an ACE score, and why does it matter?
-
- 4** Types of Stress
-
- 8** Personal Trauma
-
- 10** Community Trauma
-
- 13** "What Happened to You?" instead of "What's Wrong with You?"
-
- 16** Resilience
-

What is an Adverse Childhood Experience, an Adverse Community Experience, an ACE score, and why does it matter?

Learning Objective: To identify and define a variety of adverse childhood and community experiences (ACEs) in addition to determining and evaluating an ACE score.

Adverse Childhood Experiences are stressful or traumatic experiences, such as abuse, neglect and family dysfunction that disrupt the safe, stable, nurturing environments that children need to thrive. In addition to physical, emotional, and sexual abuse, physical and emotional neglect, household dysfunction (such as mental illness in the home, incarcerated relatives, and spousal abuse, substance abuse, and divorce), and community experiences such as poverty, racism, and bullying are adverse events of concernⁱ ([TCCY](#)). The higher your ACE score, the higher your risk of health and social problems. A score of 4 or more indicates elevated risk of disease, social, and emotional problems later in lifeⁱⁱ ([CDC](#)).

Feel free to inform the students about the [ACEs Questionnaire](#)ⁱⁱⁱ and let them know where they can find it. However, **do not require** that they take the questionnaire as it may bring to the surface childhood traumas that they do not remember or have worked to overcome. We do not want to re-traumatize students. ***If you present and discuss the ACEs Questionnaire, be sure to include information on how to access campus resources for mental health and counseling services.***

Recommended Source Material:

- **Website:** Tennessee Commission on Children and Youth “ACEs-Building Strong Brains Tennessee”^{iv} <https://www.tn.gov/tccy/ace/tccy-ace-building-strong-brains.html>
- **Website:** ACES Too High “Got Your ACE Score?”^v <https://acestoohigh.com/?s=got+your+ace+score%3F&submit=Search>

In-Class Activity:

Watch “Adverse Childhood Experiences: A Public Health Issue Episode #1 ACEs and their Effects”^{vi} <https://video.wcte.tv/video/aces-episode-1-u7sqje/>

Suggested Discussion Questions

1. Who is at risk for ACEs?
2. Why is it important to assess ACEs?
3. What negative adult outcomes are associated with ACEs?
4. Why is it important to have early interventions for ACEs?
5. What implications can be derived from the addition of the community-based ACEs (poverty, racism, and bullying)?
6. What examples from current events may be linked to ACEs?
7. What does the ACE score not tell you about a person?

Suggested Out-of-Class Assignment:

Have students search for articles addressing Adverse Childhood Experiences and its implication on the individual or the community. Have students prepare a written summary of the article and include reflections on what they have learned about ACEs, the community, the individual, and ideas on how they as individuals can make a positive impact.

Going Deeper:

Additional resources and media for further learning & discussion.

- **Article:** “Take the ACEs Quiz- and Learn What it Does and Doesn’t Mean^{vii}”
<https://www.npr.org/sections/health-shots/2015/03/02/387007941/take-the-ace-quiz-and-learn-what-it-does-and-doesnt-mean>
- **Article:** “Action Steps Using ACEs and Trauma-Informed Care: a Resilience Model^{viii}” by Laurie Leitch <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5409906/>
- **Website:** Centers for Disease Control and Prevention, “Adverse Childhood Experiences^{ix}” <https://www.cdc.gov/violenceprevention/acestudy/index.html>
- **Book:** *The Impact of Early Life Trauma on Health and Disease: The Hidden Epidemic*, by Ruth Lanius. (ISBN: 978-0521880268)
- **Document:** “Adverse Childhood Experiences (ACE) Questionnaire: Finding Your ACE Score^x” <https://www.ncjfcj.org/sites/default/files/Finding%20Your%20ACE%20Score.pdf>

The ACE Questionnaire is designed to determine a person's ACE score by identifying if they have experienced physical abuse, emotional abuse, sexual abuse, emotional neglect, physical neglect, household substance abuse, parental divorce, household mental illness, witnessed domestic abuse, or had an incarcerated household member.

Suggested Discussion Question:

Ask student to explain how the individual questions relate to a person's outcome or development. (Be sure to note this is not in reference to their own personal outcomes.)

For example, having a family member incarcerated could be an example of how a lack of serve and return interactions or supportive relationships negatively impact healthy brain development.

Types of Stress

Learning Objectives:

1. For students to understand the difference between the types of stress including, positive stress, tolerable stress, and toxic stress.
2. Students will learn how toxic stress can impact the neural connectivity in brain development.

Positive Stress:

- Normal and essential part of healthy development,
- Brief increases in heart rate and blood pressure,
- Mild elevations in hormonal levels,
- Example: tough test at school or a playoff game,

Tolerable Stress:

- Body's alert systems activated to a greater degree,
- Activation is time-limited and buffered by caring adult relationships,
- Brain and organs recover,
- Examples: death of a loved one, divorce, natural disaster,

Toxic Stress

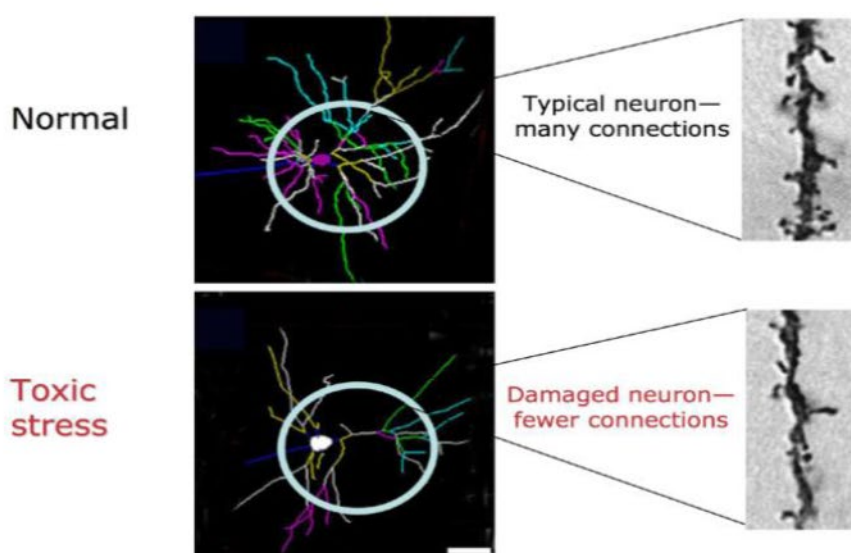
- Occurs with strong, frequent or prolonged adversity,
- Disrupts brain architecture and other organ systems,
- Increases risk of stress-related disease and cognitive impairment,
- Examples: abuse, neglect, caregiver substance abuse,

Stress becomes toxic when it is intense, prolonged, repeated, and unaddressed. Individuals experiencing toxic stress also lack a social-emotional buffering, parental resilience, early detection, and effective intervention. ACEs research shows the correlation between early adversity and poor outcomes later in life. Toxic stress explains how ACEs “get under the skin” and trigger biological reactions that lead to those outcomes. In the early 2000s, the National

Scientific Council on the Developing Child ^{xi} coined the term “toxic stress^{xii}” to describe extensive, scientific knowledge about the effects of excessive activation of stress response systems on a child’s developing brain, as well as the immune system, metabolic regulatory systems, and cardiovascular system. Importantly, the Council also expanded its definition of adversity beyond the categories that were the focus of the initial ACE study to include community and systemic causes—such as violence in the child’s community and experiences with racism and chronic poverty—because the body’s stress response does not distinguish between overt threats from inside or outside the home environment, it just recognizes when there is a threat, and goes on high alert.”



Persistent Stress Changes Brain Architecture



Prefrontal Cortex and Hippocampus

Sources: Radley et al. (2004)
Bock et al. (2005)

Toxic Stress Interferes with Ability to Learn

- Exaggerated and prolonged response to stressors,
- Affects ability to regulate emotions and behavior,

- Youth struggling with self-regulation may not communicate needs in a clear or direct manner. Individuals working with children and adolescents must learn to look past behavior to find hidden need.

The Physiologic Impact on the Brain

Research in the last several years has shown that while many of these issues (eg, substance use, behavioral issues, and physical health concerns) have been treated symptomatically, there is an underlying issue that has not yet been addressed. Many of these negative impacts are results of maladapted neural connections in the brain. Further, research has shown that neural connections, which are particularly vulnerable in the early stages of life (even infancy), can be disrupted and damaged during periods of extreme and repetitive stress - “toxic stress” - which is experienced during ACEs.

Recommended Source Material:

- **Website:** American Academy of Pediatrics “The Resilience Project: We can stop Toxic Stress^{xiii}” <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/resilience/Pages/ACEs-and-Toxic-Stress.aspx>
- **Website:** Harvard University’s Center on the Developing Child “ACEs and Toxic Stress: Frequently Asked Questions^{xiv}” <https://developingchild.harvard.edu/resources/aces-and-toxic-stress-frequently-asked-questions/>
- **Video:** Harvard University’s Center on the Developing Child “Toxic Stress Overview^{xv}” <https://developingchild.harvard.edu/science/key-concepts/toxic-stress/>
- **Video:** Alberta Family Wellness “Toxic Stress^{xvi}” <https://www.albertafamilywellness.org/resources/watch/toxic-stress>

In-Class activity:

Watch the Harvard Developing Child video and the Alberta Family Wellness video on Toxic Stress and use the following discussion questions to discuss stress and ACEs.

1. Is all stress damaging?
2. What causes stress to become toxic?
3. What is trauma, and how does it connect to ACEs and toxic stress?
4. When should we worry about toxic stress?
5. What can we do to prevent damage from toxic stress response?

Suggested Out-of-Class Assignment/Discussion Question:

Ask students to visit the “Tackling Toxic Stress” page at the Center on the Developing Child website. Ask them to read two of the five suggested articles and provide a half page summary of each article.

Related Lesson Plans: Please refer to Module II: Brain Architecture for more in-depth lesson plans that address Toxic Stress and how it affects the developing brain.

Going Deeper: Additional resources and media for further learning and discussion.

- Harvard University Center on the Developing Child “[The JPB Research Network on Toxic Stress](https://developingchild.harvard.edu/science/the-jpb-research-network-on-toxic-stress/)^{xvii}” website: <https://developingchild.harvard.edu/science/the-jpb-research-network-on-toxic-stress/>
- Harvard University Center on the Developing Child “[Tackling Toxic Stress](https://developingchild.harvard.edu/science/key-concepts/toxic-stress/tackling-toxic-stress/)^{xviii}” website: <https://developingchild.harvard.edu/science/key-concepts/toxic-stress/tackling-toxic-stress/>
- American Academy of Pediatrics “[The Resilience Project](https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/resilience/Pages/ACEs-and-Toxic-Stress.aspx)^{xix}” website: <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/resilience/Pages/ACEs-and-Toxic-Stress.aspx>

Personal Trauma

Learning Objectives:

1. Students will learn the definition of childhood traumatic stress.
2. Students will identify different types of childhood trauma.
3. Students will recognize responses to trauma in children.
4. Students will understand how trauma affects child victims.
5. Students will learn the connection between stress, stress responses, and the developing brain.

In-Class Activity:

Print copies of “What is Child Traumatic Stress?”^{xx} website: <https://www.samhsa.gov/childrens-awareness-day/past-events/2017/child-traumatic-stress-resources> (scroll down to

Understanding Trauma and click “*What is Child Traumatic Stress*”) published by the National Child Traumatic Stress Network. Allow the class to read the handout and discuss any questions. Ask the class to define childhood traumatic stress, as well as think of additional experiences that may be traumatic for children.

- Watch “[Through Our Eyes: Children, Violence, and Trauma—Introduction](https://www.youtube.com/watch?v=z8vZxDa2KPM)”^{xxi} video: <https://www.youtube.com/watch?v=z8vZxDa2KPM>. Ask the students to identify the different types of trauma or stress described in the video.

Suggested Out-of-Class Assignment:

Explore the “[Sesame Street in Communities](https://sesamestreetincommunities.org/topics/traumatic-experiences/)”^{xxii} website:

<https://sesamestreetincommunities.org/topics/traumatic-experiences/>

- How can these resources serve children affected by childhood stress?
- Which resource stands out the most to you as being effective in helping children?
- Do you feel that you will be able to modify and possibly use any of these resources with the population you plan to work with? Which ones? How would you modify the resource to work with adults or another population?

Related Lesson Plans: Please refer to “Module III, Individual Trauma Impact” to explore more in depth the different types of personal trauma that can impact a child’s ACEs score.

Going Deeper: Additional resources and media for further learning and discussion.

1. Watch the following clip on Child Sexual Abuse: “Stewards of Children Child Sexual Abuse Prevention Training”^{xxiii} https://www.youtube.com/watch?time_continue=42&v=A0d0b7S4p6o
2. Learn the facts about Child Sexual Abuse and invite a trained facilitator into your class to conduct a full training and empower adults to prevent child abuse. Contact a facilitator at <http://www.cacrutherford.org/darkness-to-light.html>. **This exercise may be difficult or triggering for some students. Provide information on counseling options.**

Community Trauma

Learning Objective: To have a general understanding of trauma at a community level and how a person's community can cause Adverse Childhood/Community Experiences.

Recommended Source Material:

- **Publication:** "[Adverse Community Experiences and Resilience: a Framework for Addressing and Preventing Community Trauma](https://www.preventioninstitute.org/sites/default/files/publications/Adverse%20Community%20Experiences%20and%20Resilience.pdf)", by the Prevention Institute.^{xxiv} <https://www.preventioninstitute.org/sites/default/files/publications/Adverse%20Community%20Experiences%20and%20Resilience.pdf>
- **Publication:** "[Hopelessness: a byproduct of violence in Chicago](https://www.chicagotribune.com/opinion/commentary/ct-chicago-south-side-crime-unemployment-perspec-0131-md-20170130-story.html)", by Inger E. Burnett-Zeigler, Chicago Tribune.^{xxv} <https://www.chicagotribune.com/opinion/commentary/ct-chicago-south-side-crime-unemployment-perspec-0131-md-20170130-story.html>
- **Video:** "[LA riots: How days of violence changed the city and its residents](https://www.youtube.com/watch?v=eEed-GIAoU8)", CBS This Morning.^{xxvi} <https://www.youtube.com/watch?v=eEed-GIAoU8>
- **Video:** "[Growing up with War: Children of Syria. The tragedy of kids who have never known peace](https://www.youtube.com/watch?v=5k9dXxHOyBk)", by RT Documentary.^{xxvii} <https://www.youtube.com/watch?v=5k9dXxHOyBk>

In-Class Activity:

Community trauma is not just the aggregate of individuals in a neighborhood who have experienced trauma from exposures to violence. There are manifestations, or symptoms, of community trauma at the community level. The symptoms are present in the social-cultural environment, the physical/built environment and the economic environment. Community trauma is often linked to community violence, but also includes communities who have faced weather devastation, health outbreaks, poverty, and much more. Many communities are working to prevent violence and promote community safety. However, in communities that experience high rates of violence, community members also experience high levels of toxic stress. Children who grow up in poverty, in communities with low investments in infrastructure, communities that experience challenges that result in marginalization, or trauma of the community members will face lower life expectancies and poor health outcomes that are tied to adverse community experiences.

Symptoms of Community Trauma



Source: Adverse Community Experiences and Resilience 2016

Elements of a Resilient Community



Source: Adverse Community Experiences and Resilience 2016

In Class Discussion Question:

What does community trauma look like in the United States?

- **Article:** Chicago Tribune commentary “[Hopelessness: a byproduct of violence in Chicago](https://www.chicagotribune.com/opinion/commentary/ct-chicago-south-side-crime-unemployment-perspec-0131-md-20170130-story.html).”^{xxviii} <https://www.chicagotribune.com/opinion/commentary/ct-chicago-south-side-crime-unemployment-perspec-0131-md-20170130-story.html>
- **Video:** CBS This Morning “[LA Riots: How days of violence changed the city and its residents](https://www.youtube.com/watch?v=eEed-GIAoU8).”^{xxix} <https://www.youtube.com/watch?v=eEed-GIAoU8>

Suggested Out-of-Class Assignment:

Ask students to pick an ACE-associated health risk factor. Have them research the associated health costs to the individual and the community. Also, have the students look at community trauma in the United States.

- What is being done in communities to address community trauma or community violence?
- What does trauma look like in war zone countries?

Watch the video: “[Growing up with War: Children of Syria. The tragedy of kids who have never known peace](https://www.youtube.com/watch?v=5k9dXxHOyBk).”^{xxx} <https://www.youtube.com/watch?v=5k9dXxHOyBk> This video has disturbing images of the product of war.

- Identify a community experiencing trauma. Explain, in your opinion, what you think the community should do to deal with community trauma?

Going Deeper: Additional resources and media for further learning and discussion.

Website: Center for Poverty Research <https://poverty.ucdavis.edu/>

For additional information and resources on Adverse Community Trauma, please refer to Module IV for a more in-depth study of the subject.

“What happened to you?” instead of “What’s wrong with you?”

If you have not covered a basic overview of ACEs and what they are, please refer to Module I.a. to provide your students with a foundational understanding of the subject.

Learning Objective:

After you have learned what trauma is and the impact of trauma, it is important to learn how to practice trauma-informed care approaches inclusive of your services and working environment. When an individual presents maladaptive behaviors or emotions that affect their ability to function, asking “what is wrong with you?” implies that the individual is broken or damaged without hope for change. Asking an individual “what happened to you?” recognizes and acknowledges that the presenting maladaptive behaviors or emotions could be a result of trauma or an ACE. This shift in perspective is called being trauma-informed.

Once you are trauma-informed, you can adopt trauma-informed care approaches in your organization. Utilizing trauma-informed care approaches includes four main concepts. According to SAMHSA, a program, organization, or system that is trauma-informed: (1) **realizes** the widespread impact of trauma and understands the potential paths to healing, (2) **recognizes** the signs and symptoms of trauma in staff and clients, and other individuals involved in the system, (3) **responds** fully by integrating knowledge about trauma into their policies, procedures, practices, and settings, and (4) actively **resists** re-traumatization.

Refer to SAMHSA’s Six-Key Principles of a Trauma Informed Approach:

A trauma-informed approach reflects adherence to six key principles rather than a prescribed set of practices or procedures. These principles may be generalizable across multiple types of settings, although terminology and application may be setting- or sector-specific:

1. Safety
2. Trustworthiness and Transparency
3. Peer Support
4. Collaboration and Mutuality
5. Empowerment, Voice and Choice

6. Cultural, Historical, and Gender Issues

Recommended Source Material:

- **Video:** “[Trauma Informed and Trauma Specific Services](https://www.youtube.com/watch?v=ZDazleocTd0)” by Strengthening Hope and Resilience Everyday^{xxxi} <https://www.youtube.com/watch?v=ZDazleocTd0>
- **Video:** “[The Paradox of trauma-informed care](https://www.youtube.com/watch?v=jFdn9479U3s)” by Vicky Kelly, TEDxWilmington <https://www.youtube.com/watch?v=jFdn9479U3s>
- **Video:** “[Pathways to Health and Healing: Building a Trauma-Informed Workplace](https://www.youtube.com/watch?v=fn9pRqeTF2c)” by Transformative Culture Project^{xxxii} <https://www.youtube.com/watch?v=fn9pRqeTF2c>
- **Website:** SAMHSA “[Trauma-Informed Approach & Trauma-Specific Interventions](https://www.samhsa.gov/programs)”^{xxxiii} <https://www.samhsa.gov/programs>

In-Class Activity: Show the above YouTube videos in class and encourage discussion about the application of “Trauma-Informed Care” in your discipline. Feel free to use these questions and prompts as conversation launch points for your in-class discussion.

1. How does your perspective change towards an individual that is behaving inappropriately for their given situation (acting out, being aggressive, not listening, etc.) when viewed through the lens of being trauma-informed? What changes in your thought process when you ask, “What happened to you?” instead of “What’s wrong with you?”
2. In your future career, describe the various ways to make your future organization trauma-informed (services provided, working environment, services for employees who have experienced trauma, etc.).

Suggested Out-of-Class Assignment: Interview supervisors or managers in the field you are interested in working in the future. Ask them the following questions:

- What does trauma look like in your organization?
- Has it affected the services your organization offers?
- Do you currently utilize trauma-informed approaches in your organization? If so, what are they? If no, why not?
- What policies and/or practices do you have in place to help your employees who have experienced trauma?

- What approaches would you like to implement to make your organization trauma-informed?

Reflection Exercise for Out-of-Class Assignment:

Think back to a time when you or someone close to you experienced an ACE or traumatic event. Was the care received trauma-informed? If yes, how? If no, what could have been done differently to make the services and experience trauma-informed?

Related Lesson Plans: The lesson plans included in Module V: Implications for Practice can provide additional resources for discussing “trauma-Informed approaches.” The lessons plans in Module V are organized by profession or educational discipline.

Going Deeper:

- [“Toolkit: Incorporating Trauma Informed Practice and ACES into Professional Curricula”](http://www.philadelphiaaces.org/resources/toolkit-incorporating-trauma-informed-practice-aces-professional-curricula) by the Philadelphia ACE Project^{xxxiv} <http://www.philadelphiaaces.org/resources/toolkit-incorporating-trauma-informed-practice-aces-professional-curricula>
- [Trauma Informed Care Project](http://www.traumainformedcareproject.org/) an additional resource on Trauma-Informed Care^{xxxv} <http://www.traumainformedcareproject.org/>

Resilience

Learning Objective:

According to the Substance Abuse and Mental Health Services Administration (SAMHSA), resilience refers to the ability of an individual, family, or community to cope with adversity and trauma, and adapt to challenges or change. Just as trauma is a personal experience, developing resiliency is equally a personal journey. What works for one person may not work for another person. Individuals may use various strategies and interventions to build their resiliency. Some various strategies to build resiliency include the following:

- Utilize culture (belief system, values, customs, etc.) as a source for strength for an individual, family, or community who has experienced trauma.
- Build relationships with family, friends, or other people who will care and provide social support.
- Avoid seeing the trauma or crises as insurmountable problems.
- Accept that change is a part of life and develop realistic goals (small and steady accomplishments).
- Instead of completely detaching from the trauma, take decisive decisions and actions to process and work through the trauma or crisis.
- Look for opportunities for self-discovery and how you may have grown as a result of your trauma or crisis.
- Develop a positive view of yourself and your ability to solve problems.
- Keep things in perspective and avoid blowing the traumatic event out of proportion. Maintaining a long-term view of the traumatic event is helpful in building resiliency.
- Maintain an optimistic outlook and expect good things to happen to you.
- Take care of yourself by paying attention to your own needs and feelings by engaging in activities that you enjoy and that are relaxing. A calm and relaxed body is less impacted by trauma.
- Create a self-care plan to implement when overwhelming and anxiety-filled feelings increase. The self-care plan focuses on how you take care of yourself in various dimensions including, but not limited to physically, emotionally, psychologically, spiritually, and socially.

Recommended Source Material:

- **Video:** “[What Trauma Taught Me about Resilience](https://www.youtube.com/watch?v=3qELiw_1Ddg)”, by Charles Hunt, TEDx ^{xxxvi}
https://www.youtube.com/watch?v=3qELiw_1Ddg

- **Handout:** [“What’s Your ACE Score & What’s Your Resilience Score?”](#) by Irene Greene^{xxxvii}
- **Website & Video:** [“What is Resiliency”](#) by Trauma Recovery^{xxxviii}
- **Website & Handouts:** [“How to Build Resilience with Resilience Training \(+ Real Life Examples\)”](#)^{xxxix} by Positive Psychology Program
<https://positivepsychologyprogram.com/resilience-training-build-resilient-individuals-groups/>
- **Online Game:** [“Tipping the Scales: Build Resilience in the Community”](#) by the Harvard Center on the Developing Child^{xl} <https://developingchild.harvard.edu/resilience-game/>

In-Class Activity:

- After watching the Charles Hunt & Trauma Recovery videos, print out some resilience building exercises by Positive Psychology and conduct some in class training exercises. Discuss the process and results of the exercises as they pertain to your discipline.
- As a class, discuss various behaviors, thoughts, individual actions, families, or communities and how they can build resiliency after experiencing a traumatic event.
- Schedule a showing of the movie “Resilience” for your class as an in-class activity, followed by a discussion afterwards or at the next class. Check with CHHS or the library for showing options.

Suggested Out-of-Class Assignment:

Create a self-care plan that concentrates on caring for yourself physically, socially, emotionally, spiritually, and psychologically. Over the next 30 days, implement your self-care plan. Journal how the self-care plan has affected your overall well-being and ability to handle stressful and anxiety-filled situations.

Going Deeper:

Self-Discovery Activity: Take the ACEs Assessment and the Resilience Questionnaire. (Note that this should be optional) <https://www.irenegreene.com/wp-content/uploads/ACEScoreResilienceQ2.pdf>^{xli} Then, Journal the following:

- What is your ACEs score and Resilience score?

- How has your resilience score influenced the way you respond to your ACE(s), trauma, or high anxiety situations?
- How can you increase your resiliency score and improve response to stress, anxiety, and/or trauma?

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- i <https://www.tn.gov/tccy/ace/tccy-ace-building-strong-brains.html>
- ii <https://www.cdc.gov/violenceprevention/acestudy/>
- iii <https://www.ncjfcj.org/sites/default/files/Finding%20Your%20ACE%20Score.pdf>
- iv <https://www.tn.gov/tccy/ace/tccy-ace-building-strong-brains.html>
- v <https://acestoohigh.com/?s=get+your+ace+score%3F&submit=Search>
- vi <https://video.wcte.tv/video/aces-episode-1-u7sgje/>
- vii <https://www.npr.org/sections/health-shots/2015/03/02/387007941/take-the-ace-quiz-and-learn-what-it-does-and-doesnt-mean>
- viii <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5409906/>
- Leitch L. (2017). Action steps using ACEs and trauma-informed care: a resilience model. *Health & justice*, 5(1), 5.
doi:10.1186/s40352-017-0050-5
- ix <https://www.cdc.gov/violenceprevention/acestudy/index.html>
- x <https://www.ncjfcj.org/sites/default/files/Finding%20Your%20ACE%20Score.pdf>
- xi <https://developingchild.harvard.edu/science/national-scientific-council-on-the-developing-child/>
- xii <https://developingchild.harvard.edu/science/key-concepts/toxic-stress/>
- xiii <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/resilience/Pages/ACEs-and-Toxic-Stress.aspx>
- xiv <https://developingchild.harvard.edu/resources/aces-and-toxic-stress-frequently-asked-questions/>
- xv <https://developingchild.harvard.edu/science/key-concepts/toxic-stress/>
- xvi <http://www.albertafamilywellness.org/resources/watch/toxic-stress>
- xvii <https://developingchild.harvard.edu/science/the-jpb-research-network-on-toxic-stress/>
- xviii <https://developingchild.harvard.edu/science/key-concepts/toxic-stress/tackling-toxic-stress/>
- xix <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/resilience/Pages/ACEs-and-Toxic-Stress.aspx>
- xx <https://www.samhsa.gov/childrens-awareness-day/past-events/2017/child-traumatic-stress-resources>
- xxi <https://www.youtube.com/watch?v=z8vZxDa2KPM>
- xxii <https://sesamestreetincommunities.org/topics/traumatic-experiences/>
- xxiii https://www.youtube.com/watch?time_continue=42&v=AOd0b7S4p6o
- xxiv <https://www.preventioninstitute.org/sites/default/files/publications/Adverse%20Community%20Experiences%20and%20Resilience.pdf>
- xxv <http://www.chicagotribune.com/news/opinion/commentary/ct-chicago-south-side-crime-unemployment-perspec-0131-md-20170130-story.html>
- xxvi <https://www.youtube.com/watch?v=eEed-GIAoU8>
- xxvii <https://www.youtube.com/watch?v=5k9dXxHOyBk>
- xxviii <http://www.chicagotribune.com/news/opinion/commentary/ct-chicago-south-side-crime-unemployment-perspec-0131-md-20170130-story.html>
- xxix <https://www.youtube.com/watch?v=eEed-GIAoU8>
- xxx <https://www.youtube.com/watch?v=5k9dXxHOyBk>
- xxxi <https://www.youtube.com/watch?v=ZDazleocTd0>
- xxxii <https://www.youtube.com/watch?v=fn9pRqeTF2c>
- xxxiii <https://www.samhsa.gov/nctic/trauma-interventions>
- xxxiv <http://www.philadelphiaaces.org/resources/toolkit-incorporating-trauma-informed-practice-aces-professional-curricula#overlay-context=resources/slide-deck-incorporating-trauma-and-aces-information-curricula>
- xxxv <http://www.traumainformedcareproject.org/>
- xxxvi https://www.youtube.com/watch?v=3qELiw_1Ddg
- xxxvii <https://www.irenegreene.com/wp-content/uploads/ACEScoreResilienceQ2.pdf>
- xxxviii <http://trauma-recovery.ca/resiliency/what-is-resiliency/>
- xxxix <https://positivepsychologyprogram.com/resilience-training-build-resilient-individuals-groups/>
- xl <https://developingchild.harvard.edu/resilience-game/>
- xli <https://www.irenegreene.com/wp-content/uploads/ACEScoreResilienceQ2.pdf>

Module II.

Brain Architecture

This Module Will:

- Provide deeper insight into how Toxic Stress changes the Brain Architecture.
- Outline some of the emotional and behavioral changes that can occur as a result of Toxic Stress in a child's life.
- Present some of the developmental delays associated with Toxic Stress and ACEs.
- Discuss tools and approaches that can be utilized to mitigate the negative effects of Toxic Stress: positive serve and return interactions, resilience-building practices.
- Present the concept of brain plasticity and discuss how the body wants to heal itself from trauma.



BUILDING STRONG BRAINS
TENNESSEE'S ACEs INITIATIVE

Lesson Plans

25 Toxic Stress Changes the Brain Architecture

27 Serve and Return

30 Emotional and Behavioral Changes as a Result of Toxic Stress

32 Developmental Delays Associated with Toxic Stress and ACEs

34 How to Counteract Toxic Stress

35 Brain Plasticity

Toxic Stress Changes the Brain Map

Learning Objective: To understand the impact of toxic stress on early brain development and its significance on the young child's ability to learn and adapt later in life.

If your students are not familiar with ACEs and Toxic Stress, please review Module I, "Types of Stress" for foundational information.

Recommended Source Material:

National Scientific Council on the Developing Child (2005/2014) discusses how significant adversity early in life can alter a child's capacity to learn and how positive caregiving can buffer the effects of such stress. Without strong social support, a child's brain can be impacted in terms of neural connectivity if the child is experiencing toxic stress.

Toxic stress can include abuse and neglect and may result in serious mental and physical health problems beyond childhood.

Video: ACEs Too High, "ACEs Primer" <https://acestoohigh.com/2016/04/05/five-minute-video-primer-about-adverse-childhood-experiences-study/>ⁱ

In-Class activity:

- Watch the "Brain Architecture"ⁱⁱ video by the Harvard Center on the Developing Child: <https://www.youtube.com/watch?v=VNNsN9lJkws> This will help to establish the foundation of experiences required to build a healthy brain.
- Play the *Brain Architecture Game* with students in groups. (CHHS has several copies of the game available for you to check out and use in class. Contact Sarah Gwinn x8986 to reserve.)
- Explore Zero to Three's website on a baby's developing brain, specifically the "Baby Brain Map": <https://www.zerotothree.org/resources/529-baby-brain-map>ⁱⁱⁱ.
- Toxic stress is the excessive or prolonged activation of stress response systems in the body and brain. Differentiate between positive, tolerable, and toxic stress. Refer to the

following videos: Harvard Center on the Developing Child “Toxic Stress”

^{iv}https://www.youtube.com/watch?time_continue=104&v=rVwFkcOZHJw and ACEs Too High, “ACEs Primer”^v <https://acestoohigh.com/2016/04/05/five-minute-video-primer-about-adverse-childhood-experiences-study/>.

Suggested Out-of-Class Assignment:

In groups of four, students read the articles presented below and present a visual/poster to summarize the impact of toxic stress on the brain.

Have students create a poster on how the brain develops and the role that relationships and experiences play. This assignment gives students the opportunity to focus on how neural connections affect brain development and how toxic stress can lead to neural damage.

Going Deeper: Additional resources and media for further learning and discussion.

- National Scientific Council on the Developing Child (2005/2014). *Excessive Stress Disrupts the Architecture of the Developing Brain: Working Paper No. 3*.^{vi} Updated Edition. Retrieved from https://46y5eh11fhgw3ve3ytpwxt9r-wpengine.netdna-ssl.com/wp-content/uploads/2005/05/Stress_Disrupts_Architecture_Developing_Brain-1.pdf

Note to Instructors: Resources below used this early on assume students have a complete understanding of brain development

- **Article:** Harvard Center on the Developing Child, “The Science of Neglect,”^{vii} <https://46y5eh11fhgw3ve3ytpwxt9r-wpengine.netdna-ssl.com/wp-content/uploads/2015/05/InBrief-The-Science-of-Neglect-3.pdf>
- **Article:** Harvard Center on the Developing Child, “The Science of Resilience,”^{viii} <https://46y5eh11fhgw3ve3ytpwxt9r-wpengine.netdna-ssl.com/wp-content/uploads/2015/05/InBrief-The-Science-of-Resilience.pdf>
- **Video:** Harvard Center on the Developing Child, “InBrief: The Impact of Early Adversity on Children’s Development,”^{ix} <https://www.youtube.com/watch?v=chhQc0HShCo>

Serve and Return

Learning Objective: Students will learn that stable, caring relationships and “serve and return” interactions shape brain architecture.

“Serve and return interactions shape brain architecture. When an infant or young child babbles, gestures, or cries, and an adult responds appropriately with eye contact, words, or a hug, neural connections are built and strengthened in the child’s brain that support the development of communication and social skills. Much like a game of tennis, volleyball, or Ping-Pong, this back-and-forth is both fun and capacity-building. When caregivers are sensitive and responsive to a young child’s signals and needs, they provide an environment rich in serve and return experiences.”

Taken from Harvard’s Center for the Developing Child:

<https://www.youtube.com/watch?v=KNrnZag17Ek>

The brain rapidly develops synaptic connections during the earliest years of life. Connections that are reinforced grow stronger, and those that are not, disappear. When a child does not have a serve and return interaction and is experiencing toxic stress, neural connectivity in the brain is damaged.

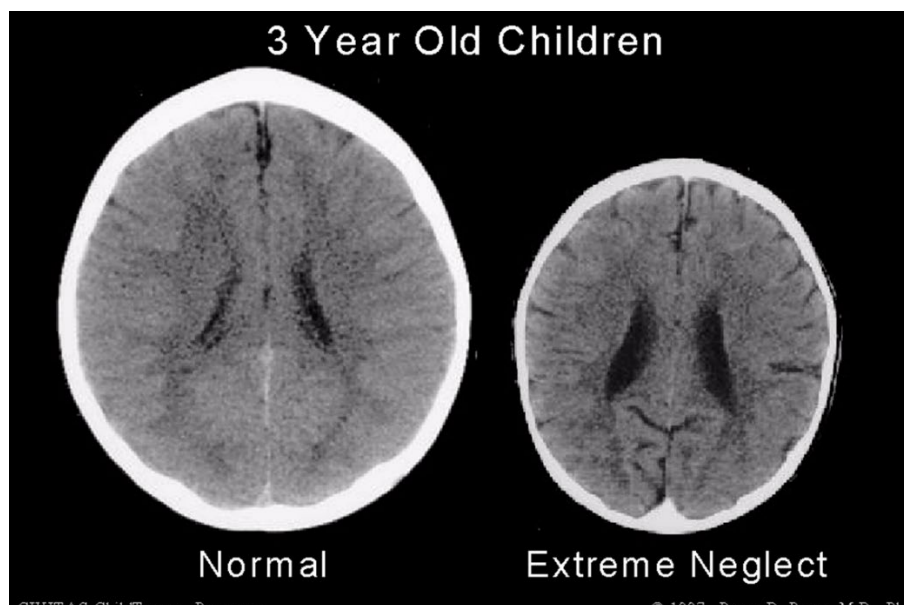


Image Source: Perry, B. D. (2002). Childhood experiences and the expression of genetic potential: What childhood neglect tells us about nature and nurture. *Brain and Mind*, 3, 79-100.

Recommended Source Material:

- **Website:** Alberta Family Wellness Initiative, “How Do We Build Strong Brain Architecture?” ^x<https://www.albertafamilywellness.org/what-we-know/serve-and-return>
- **Video:** Harvard Center on the Developing Child, “Serve and Return Overview” ^{xi}<https://www.youtube.com/watch?v=KNrnZag17Ek>
- **Video:** Harvard Center on the Developing Child, “Serve & Return Interaction Shapes Brain Circuitry,” https://www.youtube.com/watch?v=m_5u8-QSh6A
- **Video:** “Still Face Experiment: Dr. Edward Tronick” ^{xii}
<https://www.youtube.com/watch?v=apzXGEbZht0>
- **Video:** Alberta Family Wellness Initiative, “Serve and Return,”^{xiii}
<https://www.youtube.com/watch?v=TzMxrMJBZdQ>

In-Class activity:

1. Have students play with The Serve and Return Origami Game. There is an opportunity for students to discuss their personal objective in face to face interactions with other classmates. The Game can be found here:
<https://www.tn.gov/content/dam/tn/tccy/documents/ace/ACEs-Origami8.5x11.pdf>
2. Get students in groups to play the Brain Architecture Game and have students discuss what happened to them during the game. (You can check out copies of the Brain Architecture Game through CHHS. Contact Sarah Gwinn at x8986.)
3. Have students discuss how the lack or presence of serve and return impacted the developing brain (communication, education development, etc.).
4. Have students discuss what serve and return could look like in their future or current profession.

Suggested Out-of-Class Assignment/Discussion Questions:

Have students look for current programs that embody serve and return and write about how the program impacts adolescents.

Students can develop one or two strategies for interaction in developing the young brain. Refer to the Harvard Center on the Developing Child, “Serve & Return Interaction Shapes Brain Circuitry”^{xiv} video: https://www.youtube.com/watch?v=m_5u8-QSh6A

Going Deeper: Additional resources and media for further learning and discussion.

- Have students research policies, procedures and lifestyle choices that impact serve and return.
- Have students develop a program and or policy to aid in serve and return.
- Students can watch the video “FIND: Using Science to Coach Caregivers”^{xv} <https://www.youtube.com/watch?v=4C9kIZgnM04> and then read the supporting materials. Afterwards they can summarize how this project can help counteract toxic stress. You can also have them prepare a brief presentation about their ideas of the video.

Emotional and Behavioral Changes as a Result of Toxic Stress

Learning Objective: Prolonged exposure to toxic stress and traumatic events can have lasting impacts and be manifested later in life through depression and COPD. Caregivers and teachers can promote positive social emotional skills in children and families to minimize the impact of these experiences.

Recommended Source Material:

Abuse, poverty and socioeconomic status can have long lasting adverse impacts on children and families. According to Harvard's Center for the Developing Child, there are three principles to improve outcomes for children and families:

1. Support responsive relationships for children and adults.
2. Strengthen core life skills.
3. Reduce sources of stress in the lives of children and families.

Refer to this briefing: <https://developingchild.harvard.edu/resources/three-early-childhood-development-principles-improve-child-family-outcomes/>^{xvi}

In-Class Activity:

- Watch “The Importance of Teaching Social-Emotional Skills in Early Childhood Education” webinar by Barbara Kaiser:
<https://www.earlychildhoodwebinars.com/presentations/the-importance-of-teaching-social-emotional-skills-in-early-childhood-education-by-barbara-kaiser/>^{xvii}
- Read the “Promoting Young Children’s Social and Emotional Health” article by Jeannie Ho and Suzanne Funk. It appeared in *Young Children*, Vol. 73, No. 1. March 2018.
<https://www.naeyc.org/resources/pubs/yc/mar2018/promoting-social-and-emotional-health>^{xviii}
- Read the “Pushing Toward Breakthroughs: Using Innovative Practice to Address Toxic Stress” article by Carol Gerwin for the Harvard Center on the Developing Mind website

(published 12/4/2013). <https://developingchild.harvard.edu/science/key-concepts/toxic-stress/tackling-toxic-stress/pushing-toward-breakthroughs-using-innovative-practice-to-address-toxic-stress/>^{xix}

Suggested Out-of-Class Assignment:

Instruct students to check local news media or print media for a week and journal examples of toxic stress incurred by children and families in Tennessee. Relate back to the principles on improving outcomes for children and families. How could these families have benefited if they were presented with these positive resources?

Going Deeper: Additional resources and media for further learning and discussion.

- **Website:** Zero To Three, “Tips for Promoting Social-Emotional Development,” Parenting Resource, 2/21/2010. <https://www.zerotothree.org/resources/225-tips-for-promoting-social-emotional-development>
- **Article:** “Action Steps Using ACEs and Trauma-Informed Care: A resilience Model” by Laurie Leitch, printed in *Health Justice*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5409906/>^{xx}
- **Article:** “Relationships between Adverse Childhood Experiences and Adult Mental Well-Being: Results from an English National Household Survey” by Hughes, Lowey, Quigg and Bellis, in *BMC Public Health*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4778324/>^{xxi}
- **Article:** “3 Principles to Improve Outcomes for Children and Families” by the Harvard Center on the Developing Child. https://46y5eh11fhgw3ve3ytpwxt9r-wpengine.netdna-ssl.com/wp-content/uploads/2017/10/HCDC_3PrinciplesPolicyPractice.pdf
- **Question:** Based on student’s knowledge about the science of development and the above readings, explain why ACEs and adult mental health are connected.

Developmental Delays Associated with Toxic Stress and ACEs

Learning Objective: Students will be able to identify at least 4 possible developmental delays that result from Toxic Stress and ACEs.

The Recommended Source Material:

- **Website:** “Adversity, Toxic Stress & Resiliency^{xxii}” Power Point found here: http://www.startatsquareone.org/sites/default/files/attachments/Panel%20Slides_Jessica%20Wozniack_0.pdf

This presentation (Adversity, Toxic Stress and Resiliency) provides an effective overview of the negative impact of Toxic Stress and ACEs on the developing child. This presentation also identifies numerous behaviors that may be seen when a child has been exposed to Toxic Stress and ACEs.

- **Article:** “3 Principles to Improve Outcomes for Children and Families” by the Harvard Center on the Developing Child. https://46y5eh11fhqw3ve3ytpwxt9r-wpengine.netdna-ssl.com/wp-content/uploads/2017/10/HCDC_3PrinciplesPolicyPractice.pdf

Young children who have experienced toxic stress may:

- Express their distress through strong physiological and sensory reactions (e.g., changes in eating, sleeping, activity level, responding to touch and transitions)
- Become passive, quiet, and easily alarmed
- May demonstrate withdrawal, lack of responsiveness, numbness
- Exhibit intense anxiety, worry, become fearful, especially regarding separations and new situations
- Experience confusion about assessing threats and finding protection, especially in cases where a parent or caretaker is the aggressor

- Engage in regressive behaviors (e.g., baby talk, bed-wetting, crying)
- Experience strong startle reactions, night terrors, or aggressive/impulsive outbursts
- Blame themselves due to poor understanding of cause and effect and/or magical thinking

Each of these behaviors, along with the resulting fragileness of the brain's architecture, make it difficult for the child to develop normal cognitive, affective, and sometimes even psychomotor skills, each of which can have a negative impact on their learning. Supportive relationships have been proven to provide a buffer against the toxicity of some stressors.

In-Class Activity:

1. Have students predict possible developmental delays associated with Toxic Stress and ACEs in early childhood.
2. Show the “Adversity, Toxic Stress & Resiliency”^{xxiii} Power Point presentation: http://www.startatsquareone.org/sites/default/files/attachments/Panel%20Slides_Jessica%20Wozniack_0.pdf. Have students complete a graphic recording their thoughts & key ideas while viewing the presentation.
3. Have students gather in small groups and share their surprises, concerns, and key ideas.
4. As a large group, discuss strategies that might be used to prevent and/or counteract these possible developmental delays.

Suggested Out-of-Class Assignment:

Students can explore resources that might be used by parents and educators to help counteract these possible developmental delays.

Students can research current policy decisions and constraints that directly impact the environments that caregivers and children are in and how children develop.

How to Counteract Toxic Stress

Learning Objective: Student will be able to identify at least 3 strategies for counteracting toxic stress.

Recommended Source Material:

Video: “We Can Prevent ACEs” ^{xxiv}(4:32 minutes)

<https://www.youtube.com/watch?v=8gm-INpzU4g>

This video presents 5 key strategies that can be used to help prevent ACEs, or at least make stress tolerable instead of toxic, in the lives of children and their families. These 5 key strategies are:

1. Establish strong economic support for families
2. Change social norms to support parents and positive parenting skills
3. Provide quality child care and education early in life
4. Encourage the development of parenting skills
5. Intervene to lessen the harms of ACEs and prevent future risk

In-Class Activity:

1. Have students work in groups to brainstorm ways to apply each of the 5 strategies for preventing ACEs.
2. Have each group share their strategies by either creating a poster, Power Point, or scenario to explain key ideas.

Brain Plasticity

Learning Objective: Students will be able to define neural plasticity and describe its importance in the recovery and repair of the brain.

Recommended Source Material:

- **Article:** “[Brain Plasticity: What is it? Learning & Memory](https://faculty.washington.edu/chudler/plast.html)”^{xxv}
<https://faculty.washington.edu/chudler/plast.html>
- **Video:** “[Brain Plasticity: The Story of Jody](https://www.youtube.com/watch?v=VaDILD97CLM)” (5:44 minutes)^{xxvi}
<https://www.youtube.com/watch?v=VaDILD97CLM>
- **Video:** “[Building Homes & Brains – Neural Plasticity](https://www.youtube.com/watch?v=jrSVhYtzF4s)” (4:31 minutes)^{xxvii}
<https://www.youtube.com/watch?v=jrSVhYtzF4s>

This video describes how neural plasticity allows the brain to adapt and regain lost functions. This is particularly important for individuals who have had brain injuries or for individuals who have suffered early deprivation which has impacted brain growth and functions. The video indicates that the recovery of lost functions in young children are most likely when:

*The child is placed in a supportive, loving household

*The child receives cognitive, physical, and mental therapy

In-Class Activity:

1. Ask students if they think they could function with half of a brain. Share responses.
2. Show the video: “[Brain Plasticity: The Story of Jody](https://www.youtube.com/watch?v=VaDILD97CLM)” (5:44 minutes)
<https://www.youtube.com/watch?v=VaDILD97CLM>^{xxviii} and have students share their reactions.
3. Have students view the video “[Building Homes & Brains – Neural Plasticity](https://www.youtube.com/watch?v=jrSVhYtzF4s)” (4:31 minutes)
<https://www.youtube.com/watch?v=jrSVhYtzF4s>^{xxix}

4. Have students discuss in pairs the implications for children who experience ACEs and share recommendations with the large group.

Suggested Out of Class Assignment:

Read the article, "Brain Plasticity: What is it?"

^{xxx}<https://faculty.washington.edu/chudler/plast.html>

Have students determine a plan of action to enhance their own brain plasticity to improve their learning and memory.

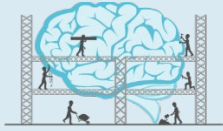
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- i <https://acestoohigh.com/2016/04/05/five-minute-video-primer-about-adverse-childhood-experiences-study/>
- ii <https://www.youtube.com/watch?v=VNNsN9lJKws>
- iii <https://www.zerotothree.org/resources/529-baby-brain-map>
- iv https://www.youtube.com/watch?time_continue=104&v=rVwFkcOZHJw
- v <https://acestoohigh.com/2016/04/05/five-minute-video-primer-about-adverse-childhood-experiences-study/>
- vi https://46y5eh11fhgw3ve3ytpwxt9r-wpengine.netdna-ssl.com/wp-content/uploads/2005/05/Stress_Disrupts_Architecture_Developing_Brain-1.pdf
- vii <https://46y5eh11fhgw3ve3ytpwxt9r-wpengine.netdna-ssl.com/wp-content/uploads/2015/05/InBrief-The-Science-of-Neglect-3.pdf>
- viii <https://46y5eh11fhgw3ve3ytpwxt9r-wpengine.netdna-ssl.com/wp-content/uploads/2015/05/InBrief-The-Science-of-Resilience.pdf>
- ix <https://www.youtube.com/watch?v=chhQc0HShCo>
- x <https://www.albertafamilywellness.org/what-we-know/serve-and-return>
- xi <https://www.youtube.com/watch?v=KNrnZag17EK>
- xii <https://www.youtube.com/watch?v=apzXGEbZht0>
- xiii <https://www.youtube.com/watch?v=TzMxrMJBZdQ>
- xiv https://www.youtube.com/watch?v=m_5u8-QSh6A
- xv <https://www.youtube.com/watch?v=4C9kIZgnM04>
- xvi <https://developingchild.harvard.edu/resources/three-early-childhood-development-principles-improve-child-family-outcomes/>
- xvii <https://www.earlychildhoodwebinars.com/presentations/the-importance-of-teaching-social-emotional-skills-in-early-childhood-education-by-barbara-kaiser/>
- xviii <https://www.naeyc.org/resources/pubs/yc/mar2018/promoting-social-and-emotional-health>
- xix <https://developingchild.harvard.edu/science/key-concepts/toxic-stress/tackling-toxic-stress/pushing-toward-breakthroughs-using-innovative-practice-to-address-toxic-stress/>
- xx <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5409906/>
- Leitch L. (2017). Action steps using ACEs and trauma-informed care: a resilience model. *Health & justice*, 5(1), 5. doi:10.1186/s40352-017-0050-5
- xxi Hughes K, Lowey H, Quigg Z, Bellis MA. Relationships between adverse childhood experiences and adult mental well-being: results from an English national household survey. *BMC Public Health*. 2016;16:222. Published 2016 Mar 3. doi:10.1186/s12889-016-2906-3
- xxii http://www.startatsquareone.org/sites/default/files/attachments/Panel%20Slides_Jessica%20Wozniack_0.pdf
- xxiii http://www.startatsquareone.org/sites/default/files/attachments/Panel%20Slides_Jessica%20Wozniack_0.pdf
- xxiv <https://www.youtube.com/watch?v=8gm-INpzU4g>
- xxv <https://faculty.washington.edu/chudler/plast.html>
- xxvi <https://www.youtube.com/watch?v=VaDILD97CLM>
- xxvii <https://www.youtube.com/watch?v=jrSVhYtzF4s>
- xxviii <https://www.youtube.com/watch?v=VaDILD97CLM>
- xxix <https://www.youtube.com/watch?v=jrSVhYtzF4s>
- xxx <https://faculty.washington.edu/chudler/plast.html>

Module III.

Individual Trauma Impact

This Module Will:

- Outline and define the different kinds of trauma a child may experience on an individual level and the different impacts those traumas may have.
- Address Personal Trauma within the context of physical abuse, verbal abuse, sexual abuse, physical neglect, and emotional neglect.
- Address Family Trauma within the home such as alcoholism, drug addiction, domestic violence, parental incarceration, mental illness, death, or abandonment.
- Discuss other kinds of individual trauma, including food insecurity, housing instability, racism, involvement within the foster care system, or the juvenile justice system.



BUILDING STRONG BRAINS
TENNESSEE'S **ACEs** INITIATIVE

Lesson Plans

43 Childhood Trauma as Personal Trauma

47 Childhood Trauma as Family Trauma

52 Other Kinds of Childhood Trauma

Childhood Trauma as Personal Trauma: Physical Abuse, Verbal Abuse, Sexual Abuse, Physical Neglect & Emotional Neglect

Learning Objective: To develop an understanding of ways in which trauma is experienced by individuals, and to define differing types of trauma.

There are a number of childhood experiences that are, by definition, traumatic experiences. Multiple types of abuse and neglect lead to toxic stress, and subsequent physical, emotional, and mental health issues. However, it is important to understand that the experience of child abuse does not always indicate the manifestation of chronic disease, emotional instability or mental health issues.

Child abuse and neglect are defined based on **acts of commission** and **acts of omission**.

- Acts of commission include deliberate and intentional attempts to harm a child. Acts of commission include physical abuse, sexual abuse, and psychological abuse.
- Acts of omission include failing to provide for a child's basic needs. This may include failure to attend to physical, emotional, or educational needs. It may also include failing to protect a child from harm. Acts of omission may include physical neglect, emotional neglect, medical or dental neglect, educational neglect, inadequate supervision, and exposing a child to a violent environment (Leeb, Paulozzi, Melanson, Simon, & Arias, 2008ⁱ).

Complete definitions of each type of neglect and abuse can be found at:

“CDC Child Maltreatment Surveillance”

ⁱⁱhttps://www.cdc.gov/violenceprevention/pdf/CM_Surveillance-a.pdf

Some important statistics related to the prevalence of child abuse and neglect in the US include:

The Centers for Disease Control and Prevention reported 676,000 victims of child abuse and neglect (HHS, 2018, p. ii)ⁱⁱⁱ. <https://www.acf.hhs.gov/cb/research-data-technology/statistics-research/child-maltreatment>

Throughout their lifetimes, one in four children experience some form of child abuse or neglect, and one in seven have experienced abuse or neglect within the past year.

In 2016, over 1,750 children died from abuse or neglect (HHS, 2018, p. ii)^{iv}.

<https://www.acf.hhs.gov/cb/research-data-technology/statistics-research/child-maltreatment>

Recommended Source Material:

- **Website:** Child Welfare Information Gateway. <https://www.childwelfare.gov/>^v
- **Website & Video:** Centers for Disease Control and Prevention “Child Abuse and Neglect Prevention.” <https://www.cdc.gov/violenceprevention/childabuseandneglect/index.html>^{vi} This site includes written content and a video describing the definitions of child abuse and neglect.
- **Government Report:** Centers for Disease Control and Prevention, “Child Maltreatment Surveillance: Uniform Definitions for Public Health and Recommended Data Elements.” https://www.cdc.gov/violenceprevention/pdf/CM_Surveillance-a.pdf^{vii} This document provides uniform definitions of child maltreatment.
- **Government Report:** U.S. Department of Health and Human Services, “Child Maltreatment, 2016.” <https://www.acf.hhs.gov/sites/default/files/cb/cm2016.pdf>^{viii}

In-Class Activity: (https://www.cdc.gov/violenceprevention/pdf/CM_Surveillance-a.pdf^{ix})

Suggested Discussion Questions

1. What are some examples of acts of commission and omission? What do you think is more harmful to a child?
2. In what ways do you think child maltreatment affects a person in adulthood?
3. Look at the examples of neglect on page 17 provided in the document by the CDC. Discuss why these might contribute to neglect. For example: A 9-year-old child must make his/her own dinner several times per week because the caregiver is sleeping or not home. Why might that example be categorized as neglect?

Using the following examples, discuss the effects of the co-occurrence of multiple types of abuse on the individual child.

- Police find a 20-month-old child with bruises on extremities, cigarette burns to the forehead and upper chest, and signs of dehydration. The child was at home with the male caregiver who was high on opium. In this instance, physical abuse, failure to

provide (adequate nutrition), failure to protect (caregiver is under the influence of drugs and unable to care for the child), and psychological abuse have occurred.

- Paramedics find a two-and-a-half-year-old child. The undressed child was walking outside in the winter and had belt-patterned bruises on the legs and trunk. The child also had ethyl alcohol in his blood system. In this example, physical abuse, failure to provide (adequate clothing), and failure to protect (unaccompanied child) have occurred.
- Upon reading a school report card, the caregiver/parent slaps the child's face, withholds food, and berates the child's ability until "better marks" are produced. In this scenario, physical abuse, failure to provide, and psychological abuse have occurred.^x

(https://www.cdc.gov/violenceprevention/pdf/CM_Surveillance-a.pdf^{xi})

Suggested Out-of-Class Assignment:

Research a recent event of child abuse or neglect. Use the definitions to describe and discuss what happened, including whether the abuse or neglect was an act of omission or commission. Reflect on how the child may be responding to the situation, and how it may affect him/her as he/she develops into adulthood.

Going Deeper:

Look at the Annie E. Casey Foundation Kids Count Data at the Kids Count Data Center via the following website: <https://www.aecf.org/>^{xii}

Compare two or more states' data related to child abuse and neglect or pick two or more counties within one state with which to compare data.

Some data elements to explore include:

- Children who have experienced two or more adverse experiences
- Substantiated child abuse/neglect cases
- Reported child abuse cases
- Children confirmed by Child Protective Services as victims of maltreatment

- Children and youth committed to state custody
- Children 0-17 in foster care
- Children who live in unsafe communities
- Children living in high poverty areas
- Child deaths
- Teen deaths from all causes
- Children with one or more emotional, behavioral, or developmental conditions

What common elements and differences did you find in your comparison?

Childhood Trauma as Family Trauma within the Home: Alcoholism or Drug Addiction, Domestic Violence, Incarcerations, Mental Illness, Death or Abandonment

Learning Objective: To connect childhood trauma to family systems, and understand the association between parent/caregiver dysfunction, family stressors, and adverse childhood experiences.

The original ACEs research (Felitti et al., 1998) highlighted the effects of household dysfunction on adult health risk behavior. Childhood trauma was categorized via a number of parent/caregiver behaviors, circumstances, and conditions. Not all of these included child abuse and neglect, instead the exposure to these dysfunctional conditions in which the family was implicated in triggering toxic stress, and adverse childhood experiences.

The study categorized adverse childhood experiences in the following way:

Child abuse: psychological, physical, or sexual abuse

Household dysfunction: exposure to substance abuse, mental illness, violent treatment of mother or stepmother, and criminal behavior in the household

The study found that more exposure to adverse childhood events equated to increased risk factors related to chronic conditions that are the leading causes of death in adults. People who reported 4 or more of the childhood stressors in comparison to those reporting none, had a 12-fold increase in health risks related to alcoholism, drug abuse, depression, and suicide attempts.

Attachment- the Foundation of Healthy Families

In thinking of the family system as the foundation on which a child grows and develops, that foundation strengthens with healthy attachment. Healthy attachment and bonding continue to be nurtured over time, and is carried throughout the developmental phases of childhood and into adulthood. Building a strong foundation as part of their own parenting role can be compromised when a parent has experienced toxic stress as a child. Issues related to childhood trauma such as substance abuse, mental health conditions, intimate partner violence, and incarceration

follow a person into adulthood, and often the parent-child attachment is formed on an already shaky, weakened foundation.

It is important to look at how trauma affects families, particularly as related to parental substance addiction from a child development perspective. Parental substance abuse affects the attachment cycle and the early parent-child bond. Mothers experiencing substance addiction exhibit less sensitivity toward their child, as well as more hostility, limited responsiveness, less empathy, neglectfulness and emotional maltreatment (Mirick & Steenrod, 2016; Seay and Kohl, 2015). These parenting behaviors affect the ability of the mother to use opportunities for bonding such as serve and return, eye contact, and consistency in meeting the needs of the infant.

As children grow into adolescence, behavioral issues sometimes arise as a result of disruptions in the development of a healthy parent-child relationship. Increased truancy, increased risk of early substance use, mental health issues, poor academic performance, and juvenile justice involvement are among the behavioral problems of children/youth whose caregivers are dealing with addiction (Seay & Kohl, 2015; Martikainen, Korhonen, Moustgaard, Aaltonen, & Remes, 2018) One can see how early cracks in the foundation of this pivotal relationship promote a cycle perpetuating ACEs, and generational toxic stress handed down from parent to child.

Family Stressors and Disruption of Attachment

The attachment process is often disrupted even when a parent is working toward recovery. Most treatment settings are not family-focused, and parents are separated from their child(ren) during inpatient and residential treatment. The process of detoxification can lead to physical symptoms that impede a parent's capacity to care for their children. Children may be placed in foster care or kinship care settings while a parent is incarcerated or in rehabilitation. This separation can foster further emotional distance between parent and child.

Another significant family issue that influences attachment and the parent-child relationship includes domestic violence. We often categorize children as witnesses to violence or being exposed to domestic violence. One study suggests that the nature of domestic violence in the family system requires that we rethink the experiences of children (Callaghan, Alexander, Sixsmith & Fellin, 2018). The perpetrator of violence delivers an exploitative and an emotionally abusive level of control over the family system, and children are the beneficiaries of this highly stressful family culture. The effects of this pervasive coercion on children are well beyond the

stress invoked by witnessing violence. The effects are experiential, and the exposure is rooted in the foundation of the child's developmental history.

Other areas that influence a family's ability to develop a healthy foundation include parental incarceration, mental illness, and abandonment. These issues are interconnected. For example, maternal depression is connected to domestic violence, addiction, and insecure parenting (Smagur, Bogat, & Levendosky, 2017; Seay & Kohl, 2015). Children often end up in foster care due to parental drug use, and parents are incarcerated, increasing the chances of separation and exacerbating their vulnerability to ACEs (Lloyd & Akin, 2014; Turney & Wludeman, 2017).

A Strengths-based Approach

It is important to understand that although cracks may occur in the foundation of the family, there are ways to mitigate the effects of ACEs, and heal as a family. Mirick and Steenrod (2016) review several promising programs to help support attachment and bonding between parent and child. Recovery must take on a family perspective and include children to shore up the weak foundation and begin building strong, healthy relationships.

Recommended Source Material:

The following articles are recommended as supplemental reading:

- Callaghan, J.E.M., Alexander, J.H., Sixsmith, J., & Fellin, L. C. (2018). Beyond "witnessing": Children's experiences of coercive control in domestic violence and abuse. *Journal of Interpersonal Violence, 33*(10), 1551-1581^{xiii}. u
- Feliti, V.J., Anda, R.F., Nordenberg, D., Williamson, D.F., Spitz, A.M., Edwards, V., Koss, M.P., & Marks, J.S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. *American Journal of Preventative Medicine, 14*(4), 245-258^{xiv}.
- Lloyd, M.H. & Akin, B.A. (2014). The disparate impact of alcohol, methamphetamine, and other drugs on family reunification. *Children and Youth Services Review, 44*, 72-81^{xv}.
- Martikinen, P., Korhonen, K., Moustgaard, H., Aaltonen, M., & Remes, H. (2108). Substance abuse in parents and subsequent risk of offspring psychiatric morbidity in late adolescence and early adulthood: A longitudinal analysis of siblings and their parents. *Social Science & Medicine, 271*, 106-111^{xvi}.
- Mirick, R. G., & Steenrod, S.A. (2016). Opioid use disorder, attachment, and parenting: Key concerns for practitioners. *Child Adolescent Social Work Journal, 33*, 547-557^{xvii}.

- Seay, K.D., & Kohl, P. L. (2015). The comorbid and individual impacts of maternal depression and substance dependence on parenting and child behavior problems. *Journal of Family Violence, 30*, 899-910^{xviii}.
- Smagur, K.E., Bogat, G.A., & Levendosky, A.A. (2018). Attachment insecurity mediates the effects of intimate partner violence and childhood maltreatment on depressive symptoms in adult women. *Psychology of Violence, 8*(4), 460-469^{xix}.
- Turney, K., & Wildeman, C. (2017). Adverse childhood experiences among children placed in and adopted from foster care: Evidence from a nationally representative survey. *Child Abuse & Neglect, 64*, 117-129^{xx}.

In-Class activity:

The following links are to videos that help support the content and will be useful in the class discussion.

1. The first video discusses risk factors stemming from parental alcohol use and the impact on the parent-child relationship from a child's early age into adulthood.

<https://www.youtube.com/watch?v=Kf1zNyKoREA>^{xxi}

Watch the video and discuss how Brody experienced his father's alcohol use. What ACEs were present and how did this affect Brody's behaviors as he grew into adulthood? What might have been different for Brody if the ACEs were not present?

2. This is a video that depicts several young people and how their parents' addiction affected them.

<https://www.youtube.com/watch?v=hN7VSdyBqBM>^{xxii}

Discuss how these teens described the effects of parental substance abuse.

3. This video describes verbal and psychological abuse and their effects on children and adults.

<https://www.youtube.com/watch?v=SWqi9whHeKM>^{xxiii}

Discuss the speaker's experiences and how they affected her into adulthood.

Suggested Out-of-Class Assignment:

Research family-based programs that support healing families involved in one or more of the identified ACEs. Write a short paper describing the program, and how it works to build a bond between parents and children.

Going Deeper:

Conduct a literature review of 3-5 research articles that address one aspect of family as related to ACEs.

Other Kinds of Childhood Trauma: Food insecurity, housing instability, & involvement with the child welfare system (foster care, child protective services, juvenile justice)

Learning Objective: To expand knowledge of the impact of ACEs in multiple domains of the lives of children and families.

The original study of adverse childhood experiences (Felliti, et al., 1998) defined specific childhood experiences that correlated to increased risk of chronic disease, mental illness, addiction, suicidality, and other risk behaviors into adulthood. Our understanding of the impact of other stressors and trauma in childhood has increased as more research uncovers the full effects of toxic stress. As a reminder, **toxic stress** is defined as *adverse experiences that lead to strong, frequent or prolonged activation of the body's stress response system*. As we think about what might trigger toxic stress, the type of stress that is connected to lifetime behavioral and physical health conditions, it is important to look at the person-in-environment. External factors and experiences play a significant role in forming long-term, prolonged stress responses.

Using the brain architecture concept, we can think of external factors that can compromise early development as storms that rattle our house. Some storms shake or crack the very foundation of our house. Other storms, or environmental factors, are difficult to weather, but the foundation of brain development isn't shaken. These storms are environmental factors external to the family system that can cause or exacerbate toxic stress and contribute to trauma. These experiences include food insecurity, housing instability, and child welfare involvement.

Food Insecurity

Food insecurity is defined by the U.S. Department of Agriculture as “a lack of consistent access to enough food for an active, healthy life.” Food insecurity reflects a family's or household's lack of available financial resources to ensure adequate food is available. Food insecurity is one of the social determinants of health and is thought of from two perspectives. Low food security includes problems accessing food, and low quality of food in the diet. Very low food security is categorized as reduced food intake by at least one member of the household, and disrupted eating patterns because of financial hardship or lack of resources (Chilton, Knowles, Rabinowich & Arnold, 2015). Examples of low food security include purchasing food with little

nutritional value or purchasing food from high-priced convenience stores due to lack of access. A family experiencing very low food security may skip meals, or a parent may not eat in order for the children to have a meal. Even in situations where the children have access to food, household food insecurity directly affects the health and wellbeing of children in the household (Chilton, Knowles, Rabinowich & Arnold, 2015).

Adverse childhood experiences reach into younger generations in many ways. This is true in food- insecure families. In the Childhood Stress Study (Chilton, Knowles, Rabinowich & Arnold, 2015), there was a strong relationship between childhood exposure to trauma and adult food insecurity. Parents and caregivers reported experiences related to depression, social isolation, and exposure to violence, neglect, and other traumas identified via the ACEs survey. These same families experienced low or very low food security.

Let's look at food insecurity from a multi-prong approach. From a nutritional perspective, food insecurity can contribute to malnutrition, and deficits in early brain development.

Preschool years are of particular importance as related to nutrition and brain development. Rapid changes occur in the brain between birth and age 5. The brain is busy building the foundation for later development and learning. The beginnings of cognitive development, attention, working memory, and inhibitory control are acquired during this important time in a child's brain development (Rosales, Reznick & Zeisel, 2009). Although nutrition is an environmental factor in development, unlike other environmental influences, nutrition can have implications related to gene structure and expression, specifically shifting the ability of genes to exert their potential on brain development and growth (Rosales, Reznick & Zeisel, 2009). This is referred to as the *epigenetic effect* of nutrition, much like the epigenetic effects of trauma and stress. In other words, nutrition is part of the foundation of the house of brain architecture, and cuts across both the biological and nurturing considerations that influence healthy brain development.

This resource provides more information about the connection between nutrition and epigenetics:

Nutrition & the Epigenome^{xxiv}

<https://learn.genetics.utah.edu/content/epigenetics/nutrition/>

There are several key terms to understand when discussing early brain development and food insecurity. Feeding America, Hunger + Health is a website that provides information about food insecurity. One specific issue to clarify is that hunger is different than food insecurity. Hunger is

a physical response, typically a discomfort, associated with lack of food. Food insecurity is a lack of resources, typically due to financial access, that affects a household.

This resource has additional information about the degrees of food insecurity and those who are most affected:

- *Hunger+Health: What is Food Insecurity?*^{xxv}
<https://hungerandhealth.feedingamerica.org/understand-food-insecurity/>

According to the U.S. Department of Agriculture, 23.6% of U.S. households were food insecure in 2017. Among those, 4.5% experienced very low food security. In about 250,000 U.S. households, children experienced food insecurity in 2017.

- *USDA Economic Research Service*^{xxvi} <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/key-statistics-graphics.aspx>

Housing Instability

Housing instability affects families and children in multiple ways. Physical and mental health are compromised when families experience the stress of housing instability and homelessness. As with food insecurity, the underpinning of housing instability is economic instability and poverty. The health effects of housing instability mirror health-related factors associated with ACEs. Health consequences related to housing instability include anxiety, depression, and self-reported poor physical health

Healthy People 2020 identifies housing instability as a key factor related to social determinants of health. Housing instability can be defined by several issues. This includes having problems paying rent, residing in overcrowded conditions, frequent moves, living with relatives, or spending a large share of income on housing. Homelessness is the most debilitating form of housing instability. The U. S. Department of Health and Human Services defines homelessness as lacking housing, or a person without permanent housing. This includes persons living on the streets, staying in shelters, missions, or temporary housing, living in abandoned buildings, or other non-permanent situations.

- **Website:** United States Department of Agriculture “Food Security in the U.S.: Key Statistics and Graphics.” <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/key-statistics-graphics.aspx>
- **Article:** Office of Disease Prevention and Health Promotion, “Housing Instability.” <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources/housing-instability>

The Interagency Council on Homelessness provides statistics and information about homelessness in the United States using the Community point-in-time counts conducted by the Continuums of Care (CoC). The CoCs are funded by the U.S. Department of Housing and Urban Development. In addition, the U.S. Department of Education collects data about students in the public-school system who are experiencing homelessness. The 2018 point-in-time count found 56,342 families with children experiencing homelessness. Children under age 18 represented 60% of people in families who were homeless. African Americans were 51% of all people in families who were homeless, and 54% of families in emergency shelters.

The link between homelessness and adverse childhood experiences was addressed. One study that used a large national representative sample (Roos et al., 2013). The study found that people with lifetime homelessness experienced higher rates of adverse childhood experiences than those who did not report lifetime homelessness. Lifetime homelessness was defined as having been homeless at least one month at any point in the participant's life. There was a disproportionate prevalence of ACEs among those currently homeless, noting a significant association between ACEs and homelessness (Roos et al., 2013).

Foster Care and Juvenile Justice Involvement

Children and youth in foster care are particularly vulnerable to the negative effects of adverse childhood experiences. The nature of being in foster care is generally related to childhood trauma and various types of abuse, often at the hands of their caregivers. In addition, separation from family and the foster care experience itself can incite traumatic experiences. There are interconnections between housing insecurity, foster care, and ACEs. Prior experiences of childhood adversity leading to foster care, and experiences during foster care such as running away, being kicked out of foster homes, and aging out of foster care with no plan for independent living are interconnected with economic and housing instability and homelessness (Curry, 2017; Fowler, Marcal, Zhang, Day & Landsverk, 2017).

The ACEs survey includes having a household member involved in the criminal justice system, or an incarcerated family member. Children are affected negatively when a parent or caregiver is incarcerated. Parental incarceration is linked to family socioeconomic instability, which may contribute to toxic stress. Children whose parents are incarcerated have often already experienced adversity, prior to the child's separation from their parent. The length of parental incarceration also plays a role in a child or youth's adverse experiences (Johnson & Easterling, 2012).

Youth in the juvenile justice system experience ACEs at higher rates than other youth (Logan-Greene, Tennyson, Nurius, & Borja, 2017;).

For youth involved in the juvenile justice system, childhood maltreatment is directly connected to their mental health status. Often these mental health issues affected the youth's on-going criminal justice involvement. The adoption of risky behaviors that may lead to legal involvement is also connected to ACEs. Several studies have noted that childhood trauma and maltreatment is connected to long-term changes to the stress responses which can lead to hyper-reactivity, hyper-arousal, impulse control issues, as well as impairments in social, emotional, and cognitive development (Logan-Greene, Tennyson, Nurius, & Borja, 2017). Higher ACEs scores were predictive of recidivism among juvenile offenders (Wolff, Baglivio, & Piquero, 2017).

Recommended Source Material:

Articles:

- Chilton, M., Knowles, M., Rabinowich, J., & Arnod, K. (2015). The relationship between childhood adversity and food insecurity: 'It's like a bird nesting in your head'. *Public Health Nutrition*, 18(4), 2643-2653. ^{xxvii}
- Curry, S. R. (2017). Childhood experiences and housing insecurity in adulthood: the salience of childhood emotional abuse. *Children and Youth Services Review*, 82, 301-309. ^{xxviii}
- Fowler, P.J., Marcal, K.E., Zhang, J., Day, O., & Landsverk, J. (2017). Homelessness and aging out of foster care: a national comparison of child welfare-involved adolescents. *Child and Youth Services Review*, 77, 27-33. ^{xxix}
- Johnson E. & Easterling, B. 2012. Understanding unique effects of parental incarceration on children: challenges, progress, and recommendations. *Journal of Marriage and Family*, 74, 342-356. ^{xxx}
- Logan-Greene, P., Tennyson, R.L., Nurius, P.S., & Borja, S. (2017). Adverse childhood experiences, coping resources, and mental health problems among court-involved youth. *Child and Youth Care Forum*, 46, 923-946. ^{xxxi}
- Roos, L.E., Mota, N., Afifi, T. O., Katz, L.Y., Distasio, J., & Sareen, J. (2013). Relationship between adverse childhood experiences and homelessness and the impact of axis I and II disorders. *American Journal of Public Health*, 103(S2), S275-S281. ^{xxxii}
- Rosales, F.J., Reznick, J.S., Zeisel, S.H. (2009). Understanding the role of nutrition in the brain and behavioral development of toddlers and preschool children: Identifying and addressing methodological barriers. *Nutritional Neuroscience*, 12(5), 190-202. ^{xxxiii}
- Wolff, K.T., Baglivio, M.T. & Piquero, A.R. (2017). The relationship between adverse childhood experiences and recidivism in a sample of juvenile offenders in community-based treatment. *International Journal of Offender Therapy and Comparative Criminology*, 61(11), 1210-1242. ^{xxxiv}

Websites

- Learn.Genetics: Genetic Science LEarning Center, “Nutrition and the Epigenome.” <https://learn.genetics.utah.edu/content/epigenetics/nutrition/>
- Feeding America, “What is Food Insecurity?” <https://hungerandhealth.feedingamerica.org/understand-food-insecurity/>
- United States Department of Agriculture: Economic Research Service, “Food Insecurity in the U.S.: Key Statistics & Graphics.” <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/key-statistics-graphics.aspx>
- Office of Disease Prevention and Health Promotion, Healthy People 2020, “Housing Instability” <https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources/housing-instability>
- National Health Care for the Homeless Council, “What is the Official Definition of Homelessness?” <https://www.nhchc.org/faq/official-definition-homelessness/>
- United States Interagency Council on Homelessness, “Homelessness Statistics by State.” [https://www.usich.gov/tools-for-action/map/#fn\[\]=1400&fn\[\]=2900&fn\[\]=6000&fn\[\]=9900&fn\[\]=13500](https://www.usich.gov/tools-for-action/map/#fn[]=1400&fn[]=2900&fn[]=6000&fn[]=9900&fn[]=13500)
- The U.S. Department of Housing and Urban Development, “201 Annual Homeless Assessment Report to Congress.” <https://files.hudexchange.info/resources/documents/2018-AHAR-Part-1.pdf>

In-Class activity:

Using the USDA website, research key statistics related to food insecurity. Who is affected most by food insecurity? What policies and programs are in place to assist children and families in addressing food insecurity? Discuss any barriers families face in accessing these programs.

Questions for in-class discussion:

1. What are common threads between food insecurity, housing instability and child welfare/criminal justice involvement? Encourage students to explore the concepts as related to poverty, and through a social justice lens.
2. Discuss how childhood trauma is passed through generations as part of the family’s experiences related to housing instability or food insecurity. How do these social issues trigger exposure to toxic stress for children?
3. In what ways does housing instability, including homelessness, affect children from a trauma perspective?
4. Discuss the effects of foster care on children and youth. How does the experience of foster care trigger or exacerbate ACEs among children and youth?

Suggested Out-of-Class Assignments:

1. The following article provides a more in-depth information on how nutrition affects brain development. Instruct students to read the article and review some of the key nutrients identified as important to healthy brain development. Look at labels of some of the foods purchased and available to food insecure families. Boxed dinners such as macaroni and cheese, ramen noodles, or other inexpensive foods. Compare the nutritional values of these items to the macro and micro nutrients identified in the article as necessary for healthy brain development. Write a reflection on your findings and implications related to food insecurity.

Article: Cusick, S.E., & Georgieff, M.K. (2016). The role of nutrition in brain development: the golden opportunity of the “first 1000 days”. *Journal of Pediatrics*, 175, 16-21.^{xxxv}

2. Using the 2018 Annual Homeless Assessment Report to Congress, compare 2018 to prior years. How has the number of families and children experiencing homelessness changed? What are the demographic characteristics of families experiencing homelessness? Which states have the highest percentage of children and families who are homeless? Write a reflection on what you find in the data, and how homelessness impacts children.
3. Using the following article, review the research and theories related to parental incarceration and children. What theory or perspective do you think best addresses this issue and why? Write a short paper describing the theory, and your perspective related to the connection to parental incarceration and adverse childhood experiences.

Article: Johnson E. & Easterling, B. 2012. Understanding unique effects of parental incarceration on children: challenges, progress, and recommendations. *Journal of Marriage and Family*, 74, 342-35^{xxxvi}

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- i <https://ncvc.dspacedirect.org/handle/20.500.11990/337>
- iii https://www.cdc.gov/violenceprevention/pdf/CM_Surveillance-a.pdf
- iii U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2018). Child maltreatment 2016. Available from <https://www.acf.hhs.gov/cb/research-data-technology/statistics-research/child-maltreatment>.
- iv U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2018). Child maltreatment 2016. Available from <https://www.acf.hhs.gov/cb/research-data-technology/statistics-research/child-maltreatment>.
- v <https://www.childwelfare.gov/>
- vi <https://www.cdc.gov/violenceprevention/childabuseandneglect/index.html>
- vii https://www.cdc.gov/violenceprevention/pdf/CM_Surveillance-a.pdf
- viii <https://www.acf.hhs.gov/sites/default/files/cb/cm2016.pdf>
- ix https://www.cdc.gov/violenceprevention/pdf/CM_Surveillance-a.pdf
- x https://www.cdc.gov/violenceprevention/pdf/CM_Surveillance-a.pdf
- xi https://www.cdc.gov/violenceprevention/pdf/CM_Surveillance-a.pdf
- xii <https://www.aecf.org/>
- xiii <https://journals.sagepub.com/doi/pdf/10.1177/0886260515618946>
- xv <https://www.sciencedirect.com/journal/children-and-youth-services-review/vol/44/suppl/C>
- xvi <https://www.ncbi.nlm.nih.gov/pubmed/30300760>
- xvii <https://link.springer.com/article/10.1007%2Fs10560-016-0449-1>
- xviii <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4607289/>
- xix https://www.researchgate.net/publication/318976587_Attachment_Insecurity_Mediates_the_Effects_of_Intimate_Partner_Violence_and_Childhood_Maltreatment_on_Depressive_Symptoms_in_Adult_Women
- xx <https://www.ncbi.nlm.nih.gov/pubmed/28086178>
- xxi <https://www.youtube.com/watch?v=Kf1zNyKoREA>
- xxii <https://www.youtube.com/watch?v=hN7VSdyBgBM>
- xxiii <https://www.youtube.com/watch?v=SWqi9whHeKM>
- xxiv <https://learn.genetics.utah.edu/content/epigenetics/nutrition/>
- xxv <https://hungerandhealth.feedingamerica.org/understand-food-insecurity/>
- xxvi <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/key-statistics-graphics.aspx>
- xxvii <https://www.ncbi.nlm.nih.gov/pubmed/25611561>
- xxviii <https://www.sciencedirect.com/science/article/pii/S0190740917304838>
- xxix <https://www.sciencedirect.com/science/article/pii/S0190740916305485>
- xxx <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1741-3737.2012.00957.x>
- xxxi <https://link.springer.com/article/10.1007/s10566-017-9413-2>
- xxxii <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3969113/>
- xxxiii <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2776771/>
- xxxiv <https://journals.sagepub.com/doi/10.1177/0306624X15613992>
- xxxv <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4981537/>
- xxxvi <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1741-3737.2012.00957.x>

Module IV. Community Trauma Impact

This Module Will:

- Present a definition of Adverse Community Experiences and reflect on the relationship between community-based ACEs and the individual.
- Explore the concept of community violence within a framework of epidemiology and discuss the relationship between violence and ACEs.
- Discuss the health and economic impact of ACEs: long-term health consequences for children and adults with ACEs, high cost of health care due to ACE-associated chronic conditions or illnesses, loss of productivity, job instability, lower education attainment, and reduced earning potential.
- Present the concept of policy-making (on local or national levels) as a tool to prevent or create Adverse Childhood or Community Experiences.



BUILDING STRONG BRAINS
TENNESSEE'S ACEs INITIATIVE

Lesson Plans

- | | |
|-----------|---|
| 65 | Adverse Community Experiences |
| 68 | Epidemiology of Violence and Its Relationship to ACEs |
| 70 | Long-Term Impact of ACEs on Health |
| 72 | Economic Consequences of Populations with High ACE Prevalence |
| 73 | Policy as a Tool to Prevent or Create Trauma |
-

Adverse Community Experiences

Learning Objective: Participants will identify trauma at a community level.

If your students are not familiar with ACEs, please refer to Module I, Lesson “What is an Adverse Childhood Experience, Adverse Community Experience, an ACE Score, and Why it Matters” as well as “Community Trauma” for a foundational understanding of the material.

Recommended Source Material:

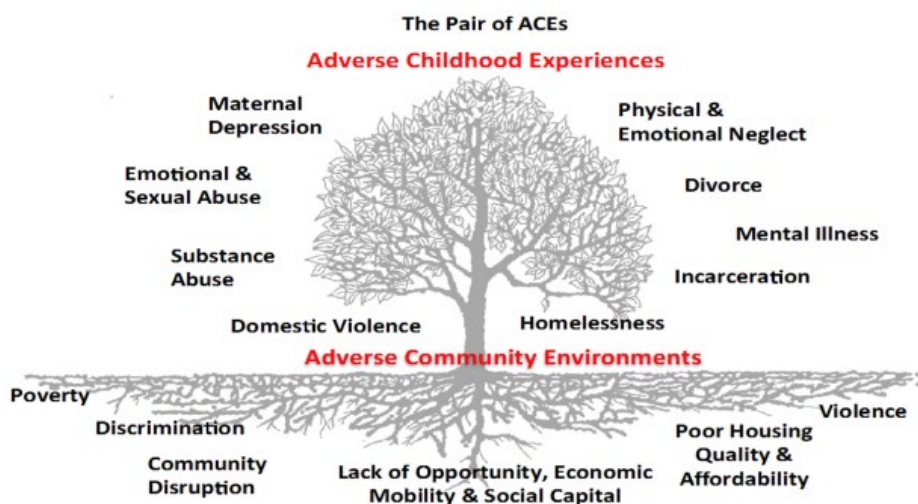
- **Toolkit:** “[Building Community Resilience: Coalition Building and Communications Guide](#)” by the Aspen Institute (specifically pages 8-11)

In-Class activity:

ACEs concern individuals’ own exposure to traumatic experiences, but research shows that community-level influences can also set the stage for individuals to experience added challenge or added strength in their individual experience with the larger host of Adverse Childhood Experiences. We call these Adverse Community Environments.

What are Adverse Community Environments (i.e., Community ACEs)?

Ellis and Dietz (2017) provide a helpful schematic for thinking about the larger picture of Individual and Community ACEs. As they outline, the Community ACEs are akin to the basic systemic elements (e.g., the soil in which the tree is rooted) need for individual growth and development (e.g., the branches and leaves on the tree). The richer the soil, the better the outcomes for individuals and communities, and the greater likelihood that resiliency is fostered.



Ellis W & Dietz W, A New Framework for Addressing Adverse Childhood and Community Experiences: The Building Community Resilience (BCR) Model, *Academic Pediatrics* (2017).

Application of Adverse Community Environments

It is helpful to take this information and make it more tangible. Using the following scenario provided by Building Community Resilience (2017), please identify factors that can foster Adverse Community Environments.

Mark and Diane:

Pair of ACEs Scenario

Mark and Diane once had thriving jobs in an Ohio manufacturing plant until a car accident left them with severe back injuries, unable to work. Ineligible to receive workman's compensation, the couple and their young children, Emma (5), Ava (7) and Lucas (10), quickly lost their livelihood, their home, and their dignity as they slid from America's middle class to America's forgotten class. Permanently disabled, Mark spends his days struggling to find odd jobs in their small town. Diane lost hope and spends her days in an opioid- and alcohol-induced fog. The family survives on a mix of public benefits, including Medicaid, welfare, Social Security income and housing vouchers. The children attend school, less for the education and more for the free breakfast and lunch that help ensure they are fed.

Key:

- Ineligible to receive workers compensation (Lack of Opportunity, Economic Mobility, Social Capital & Poverty)
- Dependence on Public Benefits (Lack of Opportunity, Economic Mobility, Social Capital & Poverty)
- Homelessness (Poor Housing Quality & Affordability & Poverty)
- Poverty
- Inadequate school (attend mostly for free breakfast and lunch) (Lack of Opportunity, Economic Mobility, Social Capital)
- Personal: Disability, Alcoholism, Drug Use, Job loss

Suggested Out-of-Class Assignment:

On your own, using the following scenarios provided by Building Community Resilience (2017), identify factors that can foster Adverse Community Environments.

Xavier:

Pair of ACEs Scenario

Eight-year-old Xavier's family spends hard earned money – of which they have very little – on bottled water instead of picking up free water and avoids accessing free, recommended developmental screening at a municipal center in their town of Flint, Michigan. Fear of deportation poses a greater risk to the family than lead contamination. Xavier's mother was born in Flint, after her parents fled war-torn El Salvador in 1989, crossing into the U.S. without documentation. His grandparents speak little English and live in Xavier's basement. Years of manual labor (migrant farming, itinerant day labor jobs, including construction and housekeeping) have left the elderly couple with numerous debilitating ailments. They are completely dependent upon Xavier's family for care. While Xavier and his parents have legal status, they live with the fear that any interaction with civil authorities will lead to the grandparents' deportation, an outcome that would be a death sentence for the couple.

Key:

- Inadequate access to basic resources (water) (Lack of Opportunity, Economic Mobility, Social Capital, Poverty, Community Disruption, & Discrimination)
- Fear of deportation for grandparents (legal status) (Discrimination)
- Mixed status family (Discrimination)
- Poverty
- Disenfranchised from public agencies due to language barrier and legal status (Lack of Opportunity, Economic Mobility, Social Capital, Poverty, Discrimination)
- Personal: Limited English, Poor Physical health

Going Deeper:

Have students watch the movie *Freedom Writers* and complete the following questions:

1. What events in the film would be contributing to an Adverse Community Environment?
2. How did the students respond to the trauma they experienced on a personal level? At a community level?
3. Were there resources in the film that created a more resilient environment for the students?

Invite students to play the online game, "[Tipping the scales: Build Resilience in the Community](#)"ⁱⁱ by the Harvard Center on the Developing Child.

Epidemiology of violence and its relationship to ACEs

Learning Objective: Introduction to the epidemiologic basis of the study of violence and injuries from violence, and to highlight the relationship violence has with adverse childhood experiences (ACEs).

If your students are not familiar with ACEs, please refer to Module I, Adverse Childhood and Community Experiences, as well as Community Trauma, for a foundational understanding of the material.

Recommended Source Material:

Please refer to Community Trauma in Module 1

- **Website:** Cure Violence, “Find Resources.” <http://cureviolence.org/resources/violence-health-index/#p=1>ⁱⁱⁱ
- **Article:** “[Exposure to Community Violence as a New Adverse Childhood Experience Category: A Summary of a New Study](#)” by Kelsey Whittington.^{iv}
- **Article:** “[Violence is a Contagious Disease](#)” by Gary Slutkin, MD.^v
- **Video:** “[Let’s Treat Violence like a Contagious Disease](#)”, Gary Slutkin, MD., TED Talk.^{vi}

In-Class activity:

Discussion of the Term Violence: Violence often appears to be an intractable problem in the United States. Crime, specifically homicide, has been an important problem for many years. Concerns about violence have led to interest in finding better ways to prevent and control violence.

One of the debates regarding the epidemiologic investigation of violence is the definition of violence. Just what exactly is violence?

Watch the following Ted Talk by Gary Slutkin: “Let’s treat violence like a contagious disease” found here:

https://www.ted.com/talks/gary_slutkin_let_s_treat_violence_like_a_contagious_disease

Discuss how the Cure Violence Health Model has helped to stop the spread of violence in communities.

Suggested Out-of-Class Assignment/Discussion Question:

In your opinion, do you believe violence in the community plays a role in public health? Please explain your answer.

Going Deeper:

With consideration of how epidemic violence has a relationship with adverse childhood experiences, discuss a possible implementation program or initiative that can be incorporated in the community. Explain the community's violence problem and how this initiative will impact the community and help prevent ACEs.

Long-Term Impact of Aces on Health

Learning Objective: To understand the long-term consequences of ACEs on health and the mechanism associated with disease development.

There are many chronic diseases that have been linked to prior ACEs impacting both physical and mental health: Obesity, Type 2 Diabetes, sexually transmitted diseases, heart disease, cancer, stroke, chronic obstructive pulmonary diseases, osteoporosis, and depression. There is a dose response relationship illustrating that as the number of ACEs increases so does the risk of disease and negative health outcomes. One mechanism linking ACEs to disease development in adulthood is rooted in compensatory and coping behaviors such as overeating, smoking, drug use, and promiscuity. For example, depression or anxiety may lead to overeating which promotes the development of Type 2 Diabetes which can exacerbate coronary artery disease development. Secondly, chronic stress is associated with elevated cortisol and inflammation which can lead to chronic headache or back pain, pulmonary fibrosis, osteoporosis, and coronary artery disease.

Recommended Source Material:

- **Website:** “About Behavioral Risk Factor Surveillance System ACE Data” Centers for Disease Control and Prevention.^{vii}
https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/ace-brfss.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Facestudy%2Face_brfss.html
- **Website:** ACEs Connection, “Got Your ACE, Resilience Scores?” by Jane Stevens.^{viii}
<https://www.acesconnection.com/blog/got-your-ace-resilience-scores>
- **Website:** The Conversation, “The steps that can help adults heal from childhood trauma.”^{ix} <https://theconversation.com/the-steps-that-can-help-adults-heal-from-childhood-trauma-77152>
- **Article:** “[Insights into Causal Pathways for Ischemic Heart Disease: Adverse Childhood Experiences Study](#)”, Dong, M., Giles, W. H., Felitti, V., J., et al.^x
- **Article:** “[Adverse Childhood Experiences and the Lifelong Consequences of Trauma](#)”, Trauma Guide by the American Academy of Pediatrics^{xi}
- **Article:** “[Long Term Physical Health Consequences of Adverse Childhood Experiences](#)”, by Dr. Shannon Monnat and Raeven Faye Chandler.^{xii}

- **Document:** “Adverse Childhood Experiences: Looking at how ACEs affect our lives and society”^{xiii} https://vetoviolence.cdc.gov/apps/phl/images/ACE_Accessible.pdf

In-Class Activity:

Print the “How do ACEs Affect our Lives?” section found here:

https://vetoviolence.cdc.gov/apps/phl/images/ACE_Accessible.pdf

Separate the class into four groups and assign each group a given ACE score. Have the students label each of the circles in their diagram and determine the top 5 outcomes associated with their ACE score. Then compare each of the five largest circles to the size of the circle in the previous ACE score diagram and estimate the percentage increase. Have each group list their outcomes in descending order on the board with the estimate of % growth.

Suggested Discussion Questions:

1. What are the top five negative consequences associated with ACEs?
2. Are the outcomes most often diseases or behaviors that may lead to disease or negative health outcomes?
3. Are the top five outcomes the same or different across the ACE score categories?
4. Where is the greatest percent increase in risk observed for the top five outcomes?

Suggested Out-of-Class Assignment:

Have each student select any three of the top negative consequences associated with elevated ACE scores and provide three examples of things that have been shown to help reduce or improve the negative outcome (such as dietary changes, counseling, physical activity).

Examples are provided in the following website: “[The steps that can help adults heal from childhood trauma](#)”^{xiv}.

Going Deeper:

Read the commentary on “[Adverse Childhood Experiences and Adult Health](#)”^{xv} by Dr. Vincent Felitti. Felitti was part of the original Kaiser Permanente ACEs study.

Economic Consequences of Populations with High Adverse Childhood Experience (ACE) Prevalence

Learning Objective: For students to understand the economic impact of ACEs at the first occurrence and the accumulative cost throughout life.

It is recommended that you review Module IV, Epidemiology of violence and its relationship to ACEs prior to beginning this lesson. It will provide foundational information on health implications for victims of ACEs.

The Recommended Source Material:

- **Article:** [“The Cost of Adverse Childhood Experiences”](#) by Ruth Gerson, MD, and David Corwin, MD. Academy on Violence and Abuse^{xvi}
- **Article:** [“The Economic Burden of Child Maltreatment in the United States And Implications for Prevention”](#) by Fang, Xiangming, et al^{xvii}
- **Article:** [“Associations Between Adverse Childhood Experiences, High-Risk Behaviors, and Morbidity in Adulthood”](#), Campbell, J.A., Walker, RR.J., Egede, L.E.^{xviii}
- **Visual Aid:** [“Adverse Childhood Experiences: Looking at how ACEs affect our lives and society”](#), Reference “Economic Toll” visual on page 4.^{xix}

In-Class Activity: Review and discuss the articles listed above. Discuss how the health challenges faced by children experiencing ACEs can impact their health in the long term (as outlined in Module IV.c.) and the expected and unexpected economic costs associated with these health challenges.

Suggested Out-of-Class Assignment: Ask students to pick an ACE-associated health risk factor. Have them research the associated health costs to the individual and the community as a whole. Ask them to research possible interventions and their associated costs. Discuss the costs of “treating” or “not treating” ACE related health and behavioral challenges and how this affects the community.

Policy as a Tool to Prevent or Create Trauma

Learning Objective: For students to understand the role that policy plays in the prevention and creation of trauma at the community, state, and federal level.

The Recommended Source Material:

- **Article:** “[Early Childhood is Key to Unlocking Health Equity](#)”, by Amanda Merck, Salud America.^{xx}
- **Article:** “[Study: Trauma Linked to Physical Ailments in Immigrant Children](#)”, by Stacy Cantu-Pawlik, Salud America.^{xxi}
- **Website:** “Policy Issues”, by the National Child Traumatic Stress Network. ^{xxii}
<https://www.nctsn.org/about-us/policy-issues>
- **Website:** “Building Trauma-Informed Systems and Policy Issues” by the Child Welfare Information Gateway.^{xxiii} <https://www.childwelfare.gov/topics/responding/trauma/building/>
- **Website:** “A Snapshot of Statutes related to ACEs and Trauma-Informed Policy”, by the State of ACEs Action.^{xxiv} <https://www.acesconnection.com/g/state-aces-action-group/blog/a-snapshot-of-statutes-related-to-aces-and-trauma-informed-policy>
- **Video:** “[What We Know about Immigrant Children Being Separated from Their Parents](#)”, ABC News.^{xxv}

In-Class Activity: Watch the video, “[What We Know about Immigrant Children being Separated from Their Parents](#)”(length 8:32)^{xxvi}, in class and discuss the immediate and future implications of having an enforced zero-tolerance policy.

Questions to ask:

- What are the psychological implications of an older sibling having to take care of younger siblings when they are separated from the parents?
- What do you think is the purpose/reason for separating children from their parents at the border?
- What was your first reaction to hearing that children are being separated from their parents?

Suggested Out-of-Class Assignment: Research a federal, state, or local policy that relates to ACEs. Describe the policy, how it relates to ACEs, how it either prevents or creates trauma, and why you think a policy exists.

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- ⁱ <https://ascend.aspeninstitute.org/wp-content/uploads/2017/10/BCR20Coalition20Building20and20Communications20Guide.pdf>
- ⁱⁱ <https://developingchild.harvard.edu/resilience-game/>
- ⁱⁱⁱ <http://cureviolence.org/resources/violence-health-index/#p=1>
- ^{iv} <https://www.acesconnection.com/blog/exposure-to-community-violence-as-a-new-adverse-childhood-experience-category-a-summary-of-a-new-study>
- ^v <https://www.ncbi.nlm.nih.gov/books/NBK207245/>
- ^{vi} https://www.ted.com/talks/gary_slutkin_let_s_treat_violence_like_a_contagious_disease#t-832389
- ^{vii} https://www.cdc.gov/violenceprevention/acestudy/ace_brfss.html
- ^{viii} <https://www.acesconnection.com/blog/got-your-ace-resilience-scores>
- ^{ix} <https://theconversation.com/the-steps-that-can-help-adults-heal-from-childhood-trauma-77152>
- ^x <https://www.ahajournals.org/doi/pdf/10.1161/01.CIR.0000143074.54995.7F>
- ^{xi} https://www.aap.org/en-us/Documents/ttb_aces_consequences.pdf
- ^{xii} <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4617302/>
- Monnat, S. M., & Chandler, R. F. (2015). Long Term Physical Health Consequences of Adverse Childhood Experiences. *The Sociological quarterly*, 56(4), 723–752. doi:10.1111/tsq.12107
- ^{xiii} https://vetoviolence.cdc.gov/apps/phl/images/ACE_Accessible.pdf
- ^{xiv} <https://theconversation.com/the-steps-that-can-help-adults-heal-from-childhood-trauma-77152>
- ^{xv} <http://static1.squarespace.com/static/500ee7f0c4aa5f5d4c9fee39/t/53ecfab7e4b03cc699a85f97/1408039607750/Adverse+Childhood+Experiences+and+Adult+Health.pdf>
- ^{xvi} http://www.avahealth.org/resources/aces_best_practices/lifetime-cost.html
- ^{xvii} <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3776454/>
- Fang, X., Brown, D. S., Florence, C. S., & Mercy, J. A. (2012). The economic burden of child maltreatment in the United States and implications for prevention. *Child abuse & neglect*, 36(2), 156–165. doi:10.1016/j.chiabu.2011.10.006
- ^{xviii} <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4762720/>
- Campbell, J. A., Walker, R. J., & Egede, L. E. (2016). Associations Between Adverse Childhood Experiences, High-Risk Behaviors, and Morbidity in Adulthood. *American journal of preventive medicine*, 50(3), 344–352. doi:10.1016/j.amepre.2015.07.022
- ^{xix} https://vetoviolence.cdc.gov/apps/phl/resource_center_infographic.html
- ^{xx} <https://salud-america.org/early-childhood-is-key-to-unlocking-health-equity/>
- ^{xxi} <https://salud-america.org/study-trauma-linked-to-physical-ailments-in-immigrant-children/>
- ^{xxii} <https://www.nctsn.org/about-us/policy-issues>
- ^{xxiii} <https://www.childwelfare.gov/topics/responding/trauma/building/>
- ^{xxiv} <https://www.acesconnection.com/g/state-aces-action-group/blog/a-snapshot-of-statutes-related-to-aces-and-trauma-informed-policy>
- ^{xxv} <https://www.youtube.com/watch?v=vTI1vS0ij8Q>
- ^{xxvi} <https://www.youtube.com/watch?v=vTI1vS0ij8Q>

Module V.

Implications for Practice

This Module Will:

- Provide discipline-specific lessons relating to Adverse Childhood Experiences.
- Present lesson plans and topics that are specific to the Community and Public Health Program within the Department of Health and Human Performance.
- Include Trauma-Informed practices and further resources specific to the College of Education.
- Further discussion of Adverse Childhood Experiences within Public Policy and the various stakeholders.
- Present trauma-informed practices within Library Sciences.



BUILDING STRONG BRAINS
TENNESSEE'S ACEs INITIATIVE

- 79** HLTH: ACEs as a Public Health Crisis: The Social Determinants of Health
- 80** HLTH: Becoming Trauma Informed
- 81** EDU: Becoming Trauma Informed
- 84** EDU: TSU Infusion Guide
- 85** Federalism and ACEs Government Information Resources
- 89** Public Policy Agenda, Stakeholder Salience
- 93** LIBS 6000: Trauma-Informed Libraries

HLTH: ACEs as a Public Health Crisis: The Social Determinants of Health

Discipline: Community and Public Health

Learning Objective: For students to understand how ACEs relate to the social determinants of health and what ACEs effect later in life.

Recommended Source Material:

Video: “Nadine Burke Harris’s TED talk: How Childhood Trauma Affects Health across a Lifetime.”

https://www.ted.com/talks/nadine_burke_harris_how_childhood_trauma_affects_health_across_a_lifetime?language=enⁱ

Video: “Adverse Childhood Experiences” [6 min - substance.org.uk]ⁱⁱ.

<https://vimeo.com/189604325>

Video: “The Things We Carry” by the Center for Youth Wellnessⁱⁱⁱ.

<https://www.youtube.com/watch?v=ngYnzNArGyo>

In-Class activity: Watch the “Nadine Burke Harris’s TED talk: How Childhood Trauma Affects Health across a Lifetime” and discuss.

Suggested Out-of-Class Assignment/Discussion Question:

Read the article “All Unhappy Childhoods Are Unhappy in Their Own Way—Differential Impact of Dimensions of Adverse Childhood Experiences on Adult Mental Health and Health Behavior” by Westermair, Stoll, Greggersen, Kahl, Huppe, Schweiger^{iv}.

<https://www.frontiersin.org/articles/10.3389/fpsy.2018.00198/full>

Have students write a one-two page reflection on the article.

HLTH: Becoming Trauma Informed

Discipline: Community and Public Health

Learning Objective: For students to understand what child maltreatment is, what the effects of child maltreatment are, to identify aspects of violence prevention, and who works in the area of violence prevention.

Recommended Source Material:

Please refer to Community Trauma in Module 1

Article: “Preventing Multiple Forms of Violence: A Strategic Vision for Connecting the Dots” by the CDC’s National Center for Injury Prevention and Control^v.

https://www.cdc.gov/violenceprevention/pdf/Strategic_Vision.pdf

In-Class activity: Explore the Community Resilience Cookbook website and use the reflection Questions to guide your class discussion^{vi}. <http://communityresiliencecookbook.org/essential-ingredients/reflection-questions/>

Suggested Out-of-Class Assignment/Discussion Question:

Play “Tipping the Scales – The Resilience Game” from Harvard’s Center on the Developing Child^{vii}. <https://developingchild.harvard.edu/resilience-game/>

- Which group was most successful in tipping the scales for the most children?
- How did they choose to spend their resilience bucks?

EDU: Becoming Trauma Informed

Discipline: Early Childhood Education, Elementary & Special Education

Learning Objective: The impact of toxic stress can have significant negative impacts on young children that can result in challenging behaviors. Schools and educators can identify these behaviors and apply strategies through trauma informed approaches.

The Recommended Source Material:

Schools and educators have an important role to play in meeting the educational needs of children who have experienced trauma.

Article: “Unlocking the Door to Learning: Trauma-Informed Classrooms & Transformational Schools” by McInerney and McKlindon^{viii} <https://www.elc-pa.org/wp-content/uploads/2015/06/Trauma-Informed-in-Schools-Classrooms-FINAL-December2014-2.pdf>

Article: “Creating Trauma-Sensitive Classrooms” by Statman-Wiel.^{ix} <https://www.elc-pa.org/wp-content/uploads/2015/06/Trauma-Informed-in-Schools-Classrooms-FINAL-December2014-2.pdf>

Website: Treatment and Services Adaptation Center: Resiliency, Hope, and Wellness in Schools, “What is a Trauma-Informed School?”

^x<https://traumaawareschools.org/traumaInSchools>

In-Class Activity: Review the above articles on trauma-informed and trauma-sensitive classrooms, as well as the above website to begin a discussion about trauma-informed schools.

Instruct students to bring in different children’s books from the booklist below and discuss strategies for using it in the classroom. Encourage them to utilize the library system, as purchases are not necessary. Suggested “Booklist for Children Coping with Loss or Trauma^{xi}” PDF link found on the left side of the following webpage: <https://www.nasponline.org/resources-and-publications/resources/school-climate-safety-and-crisis/mental-health-resources/addressing-grief>

In small groups, students will research trauma informed practices utilizing the following resources. Students will summarize key ideas, share concepts learned, and discuss how to apply it to their current practices.

Website: Supporting parents of children with challenging behavior: Regional Intervention Program^{xii} http://ripnetwork.org/expansion_%20sites/mbor.htm

Article: “Building Positive Relationships with Young Children” by Joseph and Strain, at the University of Colorado at Denver’s Center on Evidence Based Practices for Early Learning.^{xiii} <http://csefel.vanderbilt.edu/modules/module1/handout5.pdf>

Website: Zero to Three: Parenting Resource, “Tips on Helping Young Children Build Relationships.”^{xiv} <https://www.zerotothree.org/resources/227-tips-on-helping-your-child-build-relationships>

Website and Article: Edutopia, “An Inside Look at Trauma Informed Practices.”^{xv} <https://www.edutopia.org/article/inside-look-trauma-informed-practices>

Suggested Out-of-Class Assignment:

Research the following resources and create a one to two-page handout on these resources for parents to take home.

Resources for Information about Childhood Trauma

Website: National Child Traumatic Stress Network (NCTSN): www.nctsn.org^{xvi}

Website: Child Trauma Academy (CTA): www.childtrauma.org^{xvii}

Website: Trauma Center at Justice Resource Institute: www.traumacenter.org^{xviii}

Website: National Institute for Trauma and Loss in Children (TLC): www.starr.org/training/tlc^{xix}

Website: Reporting child abuse and neglect: www.childwelfare.gov/topics/responding/reporting/how^{xx}

Resources for Trauma Informed Models

Sanctuary Model® (<http://www.sanctuaryweb.com/Home.aspx>^{xxi}): This model focuses on changing organizational culture to be more sensitive to the impacts of trauma on individuals and families served as well as staff members.

Risking Connections® (<http://www.riskingconnection.com/>^{xxii}): This trauma-informed model emphasizes the importance of “RICH” relationships (i.e., relationships marked by respect, information sharing, connection, and hope) and self-care for service providers working with individuals who have experienced trauma.

Going Deeper: Additional resources and media for further learning & discussion.

Booklist: Suggested booklist for educators working with children experiencing trauma or PTSD <https://www.parentbooks.ca/Trauma & PTSD.html>^{xxiii}

Website: National Association for the Education of Young Children Publications <https://www.naeyc.org/resources>^{xxiv}

Periodical: NAEYC *Young Children* <https://www.naeyc.org/resources/pubs/yc>^{xxv}

Article: “A Natural Choice: Learning Outdoors” *Young Children*, Vol 73, No.

5. Available through subscription: <https://www.naeyc.org/resources/pubs/yc/nov2018>^{xxvi}

Article: “Rocking and Rolling. The Calm in the Storm: Supporting Young Children before, during, and after a Community Disaster or Trauma” by Julia Yeary, *Young Children*, Nov. 2018, Vol 73, No. 5.

<https://www.naeyc.org/resources/pubs/yc/nov2018/supporting-young-children-community-disaster>^{xxvii}

Webinar: National Association for the Education of Young Children, “Creating Trauma Sensitive Classrooms” by Katie Statman-Weil.

<https://www.youtube.com/watch?v=mjG3xNxtU1E&feature=youtu.be>^{xxviii}

Video: University of Minnesota Extension Children, Youth & Family Consortium, “Trauma sensitive practices in school” (4:43).

<https://www.youtube.com/watch?v=5ijW0oDDpao>^{xxix}

Article: Education Law Center, “Unlocking the Door to Learning: Trauma Informed Classrooms and Transformational Schools” by McInerney and McKlindon.

<https://www.elc-pa.org/wp-content/uploads/2015/06/Trauma-Informed-in-Schools-Classrooms-FINAL-December2014-2.pdf>^{xxx}

Website and Article: Edutopia, “An Inside Look at Trauma Informed Practices.”

<https://www.edutopia.org/article/inside-look-trauma-informed-practices>^{xxxi}

EDU: TSU Infusion Guide

Tennessee State University's Center of Excellence for Learning Sciences has already developed an extensive resource for Early Childhood Education classrooms. It is recommended that you contact Dr. Celeste Brown at the Center to request a copy of their Infusion Guide for your classroom.

Contact Information:

Dr. Celeste Brown
615-277-1631
clindsey01@tnstate.edu

Federalism and ACEs government information resources

Learning objective: Upon completion of this module, the student will be able to locate federal, state, and local government information resources that represent shared jurisdiction among the three levels of government. In particular, the student will be able to locate federal, state, and local government information resources related to the adverse childhood experiences studies (ACEs) funding.

Required Text: Hartnett, Cassandra J., Andrea L. Sevetson, and Eric J. Forte. 2016. *Fundamentals of Government Information: Mining, Finding, Evaluating, and Using Government Resources*. Neal-Schuman Publishers: New York. 2nd Edition. Other readings are cited below and are easily accessible @lib.utk.edu. Other resources: usability.gov; ideo.com; brightidea.com; Daniel Pink's *A Whole New Mind: Why Right-Brainers Will Rule the Future* Mar 7, 2006. Students are invited to post interesting news pieces, short studies, and short policy reports on the discussion board. Hartnett, Sevetson, and Forte (2016) recommend two strategies to help prospective users of government information sources find resources to fulfill their information needs. (Texts may require payment)

In-Class Activity:

Strategy 1: Think like a government documents librarian. Adopt an interview strategy. Interview questions might include: how will you use this information and what information do you have already?

Strategy 2: Understand how the government works. Federalism is a key concept and practice that describes the way levels of government in the United States (federal, state, and local) relate to each other. Dual federalism describes a relationship among levels of government in which the levels hold distinct powers, separate from each other. Metaphorically, they come together to form a layer cake. For example, only the federal government has minting powers, and state governments administer marriage and drivers' licenses. However, levels of government also share powers. Where the responsibilities and resources are mixed, metaphorically, the levels form a marble cake. This type of federalism is called cooperative federalism. In this arrangement federal, state, and local governments share jurisdictions.

Recommended Source Material:

The body of knowledge surrounding Adverse Childhood Experiences (ACEs) provides an important context for studying federalism. Government agencies recognize the impact that childhood trauma has on the future adult and are committing social, political, and financial capital toward trauma prevention, as well as intervention. The marble cake is an apt metaphor for the government's approach to ACEs: prevent and intervene. The body of grey literature about ACEs represent the collaborative efforts of federal, state, and local governments. While some effort reflects a national scope:

<https://www.cdc.gov/violenceprevention/acestudy/about.html>^{xxxii}, the federal government has been an important sponsor of ACE prevention and intervention activities at state and local levels.

The policy goals of the federal government have manifested through state and local efforts. A chief tool for achieving these goals at state and local levels is funding.

For example: the Substance Abuse and Mental Health Services Administration (SAMHSA), an agency of the U.S. Department of Health and Human Services, directly supported the Johnson City, TN System of Care Trauma-Informed Care through an \$800,000 crime reduction grant: <https://www.johnsoncitypress.com/Health-Care/2018/09/05/Johnson-City-s-trauma-informed-system-of-care-is-model-for-the-country>^{xxxiii}

SAMHSA directly funds a range of state, tribal, and local programs: <https://www.samhsa.gov/grants/grant-announcements/sm-16-009>^{xxxiv}

However, a large portion of federal funding to local agencies comes through federal allocations to states.

For example: see the SAMHSA large grants to states, based on funding formulas: <https://www.samhsa.gov/grants-awards-by-state/TN/2017>^{xxxv}

The Tennessee Commission on Children and Youth's Federal funding Grant (FFG) Program addresses juvenile justice and delinquency, both of which are now informed by knowledge about the impact of ACEs on juvenile delinquency:

<https://www.tn.gov/content/dam/tn/tccy/documents/jj/ij-prevention-18-19.pdf>^{xxxvi}

Agencies across levels of government may form partnerships: Tennessee Department of Children's Services, Tennessee Commission on Children and Youth, Tennessee Administrative Office of the Courts, and court officers from across the state formed partnerships to support recipients of \$4 million in Juvenile Justice Local Diversion Grants. Work done by these recipients and partners has built upon the Building Strong Brains – Tennessee Initiative <https://www.tn.gov/tccy/ace/tccy-ace-building-strong-brains.html>^{xxxvii} to counteract the effects of ACEs.

In 2016, the Tennessee legislature approved \$1 million to support ACE prevention and treatment-related activities. Under the guidance of the Three Branches Institute, the Building Strong Brains: Tennessee ACEs Initiative coordinating team oversaw allocations of these funds and developed a checklist of criteria for assessing proposals requesting funding: https://www.tn.gov/content/dam/tn/dcs/documents/childhealth/aces/Building_Strong_BrainsOVERVIEW-MISSION.pdf^{xxxviii}

Suggested Out-of-Class Assignment:

Implications for finding government information sources: If a user is searching for information about ACEs funding opportunities for their non-profit organization, it is useful to understand the sources and types of funding opportunities at federal, state, and local levels.

Examples of funding and program agencies

SAMHSA -Substance Abuse and Mental Health (federal)

Tennessee State Resources

Tennessee Commission on Children and Youth

Tennessee Department of Children's Services

(on the ground) Knox County, Tennessee

Juvenile Justice Court

Foster Care Review Board

Metro Drug Coalition (MDC), City of Knoxville/Knox County

Other Documents

Funding announcement for Tennessee Department of Children's Services:

<https://www.tn.gov/dcs/for-providers/procurement.html>

Public Policy Agenda, Stakeholder Salience

Learning objective: Upon completion of this module, the student will be able to use a stakeholder matrix to identify the salience of issues in policy discourses; map the evolution of the ACEs discourse using a stakeholder salience model. This lesson addresses the mechanisms by which issues come to the public policy agenda. One stakeholder model describes issue salience as based upon three criteria: legitimacy of the issue, urgency of the issue, and power of the stakeholder.

Attribute	Defining Characteristics
Power	“defines a relationship among social actors in which one social actor, A, can get another social actor, B, to do something that B would not have otherwise done” (308).
Legitimacy	“a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within in some socially constructed system of norms, values, beliefs and definition” (309)
Urgency	“represents the degree to which stakeholder claims call for immediate action” (309).

Adapted from: Joenbloed, et. al. 2008.

Stakeholder Typology		
Attribute	Classes	Salience
Power	Dormant	Latent Stakeholder
Legitimacy	Discretionary	
Urgency	Demanding	
Power and Legitimacy	Dominant	Expectant
Power and Urgency	Dangerous	
Legitimacy and Urgency	Dependent	
Power, Legitimacy, Urgency	Definitive	Definitive

Adapted from Joenbloed, et. al. 2008.

The urgency of ACEs has existed throughout human history. For example, consider the urgency of the need to address the trauma of children born in U.S. slavery and born during the immediate post-slavery era. In the absence of immediate action, people continued to suffer the effects of childhood trauma. With urgency alone, the salience of ACEs related concerns are latent in public policy discourses. With the increasing legitimacy of ACEs (increased with study in 1998 and subsequent academic and grey literature) ongoing urgency, those affected by ACEs became dependent stakeholders. Although an expectation arose that ACEs would become part of the public policy discourse (legitimacy + urgency creates expectations), the salience of ACEs was dependent upon the actions of powerful stakeholders. Powerful forces in society, public agencies and non-profits, e.g., built upon the legitimacy and urgency of ACEs. These powerful forces activated dependent stakeholders (legitimate and urgent) to create issue salience for ACEs stakeholders. As a result, ACEs are front and center in the public policy discourse in 2018. ACEs are addressed in statutes and in funding, as well as in popular press. ACEs are focal points for local, regional, and national conferences. ACEs and resilience are the subject matter in two ground breaking films.

Jongbloed, B., Enders, J., Salerno, C., 2008. Higher education and its communities: interconnections, interdependencies, and a research agenda. *Higher Education* 56, 303–324^{xxix}. https://www.jstor.org/stable/40269079?seq=1#metadata_info_tab_contents

Recommended Source Material:

Salience of ACEs – Past Three Decades

[Substance Abuse and Mental Health Services Administration](#) (SAMHSA) – probably the largest federal agency you never heard of – launched the National Child Traumatic Stress Network^{xi} (<https://www.nctsn.org/>) in 2001, and the National Center for Trauma-Informed Care (NCTIC)^{xii} (<https://www.samhsa.gov/programs>) in 2005.

Until the last 10 months, the medical community practically ignored the ACE Study. Just last December, the American Academy of Pediatrics issued a policy statement^{xiii} (<https://acestoohigh.com/2012/01/02/pediatrics-academy-tells-baby-docs-your-new-job-is-to-reduce-toxic-stress/>) recommended that its members look for toxic stress in their patients.

Article: “Welcome Upswing of State and Federal Support for Trauma-Informed Practices and Policies” by Alexandria Maul, MPH, of the Center for Health Care Strategies, Inc.

<https://www.chcs.org/welcome-upswing-state-federal-support-trauma-informed-practices-policies/>

International Journal of Environmental Research and Public Health

Article: “A Bibliometric Analysis of the Global Research Trend in Child Maltreatment”

Tran, Bach & Van Pham, Thang & Ha, Giang & Toan Ngo, Anh & Hoang, Long & Thi Minh Vu, Thuc & Ngoc Do, Ha & Nguyen, Vu & Nguyen, Anh & Tran, Tung & Thi Truong, Nu & Vuong, Quan-Hoang & Ho, Tung & Van Dam, Nhue & Vuong, Thu-Trang & Quang Nguyen, Hung & Thi Le, Huong & Thi Do, Hoa & Moir, Mackenzie & C.M. Ho, Roger. (2018). A Bibliometric Analysis of the Global Research Trend in Child Maltreatment. *International journal of environmental research and public health*. 15. 10.3390/ijerph15071456. ^{xliii}

https://www.researchgate.net/publication/326258445_A_Bibliometric_Analysis_of_the_Global_Research_Trend_in_Child_Maltreatment

Article: “A Snapshot of Statutes related to ACEs and Trauma-Informed Policy” by Elizabeth Prewitt, 2017, ACEs Connection^{xliiv}. <https://www.acesconnection.com/g/state-aces-action-group/blog/a-snapshot-of-statutes-related-to-aces-and-trauma-informed-policy>

The initial phase of the ACE Study was conducted from 1995 to 1997 Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults.

Publication: “Relationship of Child Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: The Adverse Childhood Experiences (ACE) Study.”^{xliv} Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, Koss MP, Marks JS. *Am J Prev Med*. 1998 May; 14(4):245-58. <https://www.ncbi.nlm.nih.gov/pubmed/9635069>

Website: Academy on Violence and Abuse http://www.avahealth.org/who_we_are/

Publication: “The Enduring Effects of Abuse and Related Adverse Experiences in Childhood”^{xlvi} Anda RF, Felitti VJ, Bremner JD, et al. *Eur Arch Psychiatry Clin Neurosci*. 2006; 256(3):174-86. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3232061/>

Publication: “The Origins of Addiction: Evidence from the Adverse Childhood Experiences Study^{xlvii}” Vincent J. Felitti, MD 2004.

<https://www.nijc.org/pdfs/Subject%20Matter%20Articles/Drugs%20and%20Alc/ACE%20Study%20-%20OriginsofAddiction.pdf>

Article: “The Psych Approach” by David Brooks, New York Times, 2012.

<https://www.nytimes.com/2012/09/28/opinion/brooks-the-psych-approach.html>

Radio Interview: “Back to School: Ira Glass interview of Paul Tough (author of the book *How Children Succeed*)^{xlviii}” This American Life 2012: <https://www.thisamericanlife.org/474/back-to-school>

Article: “The Adverse Childhood Experiences Study-the largest, most important public health study you never heard of-began in an obesity clinic^{xlix}” by Jane Ellen Stevens, ACES Too High News, 2012. <https://acestoohigh.com/2012/10/03/the-adverse-childhood-experiences-study-the-largest-most-important-public-health-study-you-never-heard-of-began-in-an-obesity-clinic/>

Press Release: “Child Abuse and Neglect Cost the United States \$124 billion!” CDC Newsroom, 2012. https://www.cdc.gov/media/releases/2012/p0201_child_abuse.html

Film: Paper Tigers film 2016: <https://kpfifilms.co/paper-tigers> (Note: The Center for Health and Human Services has a license to play this film on MTSU’s campus. Please contact Sarah Gwinn at 494-8986 to schedule a showing.)

Film: Resilience film 2017: <https://kpfifilms.co/resilience/> (Note: The Center for Health and Human Services has a license to play this film on MTSU’s campus. Please contact Sarah Gwinn at 494-8986 to schedule a showing.)

LIBS 6000 Trauma-Informed Libraries

Learning objective: Upon taking this course, the student will be able to create a Springshare libguide on adverse childhood experiences (ACEs) using studies and resources to fit the needs of an actual public library and the local community it serves.

Suggested Resources:

Website: Springshare LibGuides for content curation and Web Publishing^{li}.

<https://www.springshare.com/libguides/>.

Since the late 1990s, information about ACEs has multiplied. The information world of ACEs has grown along multiple-dimensions. ACEs information holds value in education, mental health, health, psychology, and social spheres. ACEs information has grown out of and informs policy, research, and professional practice across agencies and institutions.

While the proliferation of ACEs information in a largely electronic environment has made this information freely available, there is a risk of information overload among users and prospective users, especially given the lack of structure around this body of information. In the absence of a discernible, single information architecture, the ACEs information world is organized around particular professions, government constituents, individuals with knowledge of services provided by community organizations, and individuals who already have effective search terms.

Libguides can organize ACEs information into meaningful, digestible categories, to enhance ACEs literacy. In doing so, libguides represent a user-centered approach to information access. Libguides can offer point-of-need reference support to users of public libraries who seek information about ACEs or trauma. Libguides can help library users parse through the vast number of resources related to ACEs and trauma to identify resources that align with their needs. Also, libguides can affirm the quality of resources and redirect users away from misinformation.

In Class Activity: Present the broad field of librarianship as a profession. Place emphasis on the place of the library as an essential resource for communities and the role of the librarian in provision of service to all users. The e-portfolio will be planned and designed. Lesson Resource collections – libguides: Each libguide must be organized into at least five categories of ACEs information and/data. Each libguide must identify its users. If the libguide is created for a branch

library, for example, describe the demographic served by this branch. What are some key statistics associated with the community served by this branch? How could a libguide serve branch users?

Recommended Source Material:

How to Create a Libguide:

Website: Springhare LibGuides for content curation and Web Publishing.

<https://www.springshare.com/public/>

Website: “LibGuides: An Introduction and How-To Guide: What are LibGuides?^{liii}” by Bethany Latham, Jackson State University. <http://libguides.jsu.edu/libguidesbasics>

Blog Post: “The Evolution of LibGuides^{liiii}” by Joelle Mornini, 2017.

<https://alwayslearninglibrarian.wordpress.com/2017/04/04/the-evolution-of-libguides/>

Research Guide: “Harvard LibGuides Best Practices^{liv}”

https://guides.library.harvard.edu/libguides_best_practices/creatingyourguide

Website: MTSU's Walker Library Guides.

https://www.mtsu.edu/popmusic/Additional_Resources/Libguides.php

Misinformation:

Publication: Iammarino, Nicholas K., and Thomas W. O'Rourke. "The Challenge of Alternative Facts and the Rise of Misinformation in the Digital Age: Responsibilities and Opportunities for Health Promotion and Education.^{lv}" *American Journal of Health Education* 49.4 (2018): 201-205.

<https://www.tandfonline.com/doi/pdf/10.1080/19325037.2018.1465864>

Foundational Information on ACEs:

Website: CDC Violence Prevention, “Adverse Childhood Experiences (ACEs)”

https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/index.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Facestudy%2Findex.html

Publication: “Adverse Childhood Experiences: Looking at how ACEs affect our lives and society” https://vetoviolence.cdc.gov/apps/phl/resource_center_infographic.html

Role of Libraries in Health and Trauma:

Publication: Morgan, Anna U., et al. "Beyond books: Public libraries as partners for population health.^{lvi}" *Health Affairs* 35.11 (2016): 2030-2036.

<https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2016.0724>

Article and Video: "Athens-Clarke County Library Becomes First Trauma-Informed Library in Georgia^{lvii}" <http://gradynewsources.uga.edu/blog/2019/02/25/athens-clarke-county-library-becomes-first-trauma-informed-library-in-georgia/>

Publication: Blank, B. (2014). Public libraries add social workers and social programs^{lviii}. *The New Social Worker*. Found at <https://www.socialworker.com/feature-articles/practice/public-libraries-add-social-workers-and-social-programs/>

Publication: Lloyd, P. (2018). "The public library as a protective factor.^{lix}" *Public Libraries Online*. Found at <http://publiclibrariesonline.org/2018/12/the-public-library-as-a-protective-factor/>

Website: Substance Abuse and Mental Health Services Administration. (2018). *Trauma-informed approach and trauma-specific interventions*. Found at <https://www.samhsa.gov/nctic/trauma-interventions>

Risk of Secondary Trauma:

Publication: Morgan, Anna U., et al. "Public library staff as community health partners: training program design and evaluation^{lx}." *Health promotion practice* 19.3 (2018): 361-368. <https://journals.sagepub.com/doi/10.1177/1524839917735304>

Website: National Child Traumatic Stress Network, Secondary Traumatic Stress Committee <https://www.nctsn.org/trauma-informed-care/secondary-traumatic-stress>

Historical Trauma and Public Libraries:

Publication: Andrews, Nicola. "Reflections on resistance, decolonization, and the historical trauma of libraries and academia.^{lxi}" *The politics of theory and the practice of critical librarianship*. Library Juice Press. Retrieved from <https://osf.io/preprints/lissa/mva35/> (2018).

Race Trauma:

Publication: Polanco-Roman, Lillian et al. "Racial discrimination as race-based trauma, coping strategies, and dissociative symptoms among emerging adults.^{lxii}" *Psychological trauma: theory, research, practice and policy* vol. 8,5 (2016): 609-17. doi:10.1037/tra0000125. <https://www.ncbi.nlm.nih.gov/pubmed/26963957>

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- https://www.ted.com/talks/nadine_burke_harris_how_childhood_trauma_affects_health_across_a_lifetime?language=en
- ii <https://vimeo.com/189604325>
- iii <https://www.youtube.com/watch?v=ngYnzNARgYo>
- iv Westermair, Anna & M Stoll, Anne & Greggersen, Wiebke & Kahl, Kai & Hüppe, Michael & Schweiger, Ulrich. (2018). All Unhappy Childhoods Are Unhappy in Their Own Way—Differential Impact of Dimensions of Adverse Childhood Experiences on Adult Mental Health and Health Behavior. *Frontiers in Psychiatry*, 9. 10.3389/fpsyt.2018.00198. <https://www.frontiersin.org/articles/10.3389/fpsyt.2018.00198/full>
- v https://www.cdc.gov/violenceprevention/pdf/Strategic_Vision.pdf
- vi <http://communityresiliencerecipebook.org/essential-ingredients/reflection-questions/>
- vii <https://developingchild.harvard.edu/resilience-game/>
- viii <https://www.elc-pa.org/wp-content/uploads/2015/06/Trauma-Informed-in-Schools-Classrooms-FINAL-December2014-2.pdf>
- ix <https://www.elc-pa.org/wp-content/uploads/2015/06/Trauma-Informed-in-Schools-Classrooms-FINAL-December2014-2.pdf>
- x <https://traumaawareschools.org/traumainSchools>
- xi <https://www.nasponline.org/resources-and-publications/resources/school-climate-safety-and-crisis/mental-health-resources/addressing-grief>
- xii http://ripnetwork.org/expansion_%20sites/mbor.htm
- xiii <http://csefel.vanderbilt.edu/modules/module1/handout5.pdf>
- xiv <https://www.zerotothree.org/resources/227-tips-on-helping-your-child-build-relationships>
- xv <https://www.edutopia.org/article/inside-look-trauma-informed-practices>
- xvi www.nctsn.org
- xvii www.childtrauma.org
- xviii www.traumacenter.org
- xix www.starr.org/training/tlc
- xx www.childwelfare.gov/topics/responding/reporting/how
- xxi <http://www.sanctuaryweb.com/Home.aspx>
- xxii <http://www.riskingconnection.com/>
- xxiii https://www.parentbooks.ca/Trauma_&_PTSD.html
- xxiv <https://www.naeyc.org/resources>
- xxv <https://www.naeyc.org/resources/pubs/yc>
- xxvi <https://www.naeyc.org/resources/pubs/yc/nov2018>
- xxvii Yearly, J. (2018). Rocking and rolling. the calm in the storm: Supporting young children before, during, and after a community disaster or trauma. *National Association for the Education of Young Children*, 73(5). Retrieved from <https://www.naeyc.org/resources/pubs/yc/nov2018/supporting-young-children-community-disaster>
- xxviii <https://www.youtube.com/watch?v=mjG3xNxtU1E&feature=youtu.be>
- xxix <https://www.youtube.com/watch?v=5ijW0oDDpao>
- xxx <https://www.elc-pa.org/wp-content/uploads/2015/06/Trauma-Informed-in-Schools-Classrooms-FINAL-December2014-2.pdf>
- xxxi <https://www.edutopia.org/article/inside-look-trauma-informed-practices>
- xxxii <https://www.cdc.gov/violenceprevention/acestudy/about.html>
- xxxiii <https://www.johnsoncitypress.com/Health-Care/2018/09/05/Johnson-City-s-trauma-informed-system-of-care-is-model-for-the-country>
- xxxiv <https://www.samhsa.gov/grants/grant-announcements/sm-16-009>
- xxxv <https://www.samhsa.gov/grants-awards-by-state/TN/2017>
- xxxvi <https://www.tn.gov/content/dam/tn/tccy/documents/ij/ij-prevention-18-19.pdf>
- xxxvii <https://www.tn.gov/tccy/ace/tccy-ace-building-strong-brains.html>
- xxxviii https://www.tn.gov/content/dam/tn/dcs/documents/childhealth/aces/Building_Strong_BrainsOVERVIEW-MISSION.pdf

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- xxxix https://www.jstor.org/stable/40269079?seq=1#metadata_info_tab_contents
- xi <https://www.nctsn.org/>
- xli <https://www.samhsa.gov/programs>
- xlii <https://acestoohigh.com/2012/01/02/pediatrics-academy-tells-baby-docs-your-new-job-is-to-reduce-toxic-stress/>
- xliii
- https://www.researchgate.net/publication/326258445_A_Bibliometric_Analysis_of_the_Global_Research_Trend_in_Child_Maltreatment
- xliv <https://www.acesconnection.com/g/state-aces-action-group/blog/a-snapshot-of-statutes-related-to-aces-and-trauma-informed-policy>
- xlv <https://www.ncbi.nlm.nih.gov/pubmed/9635069>
- xlvi <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3232061/>
- xlvii <https://www.nijc.org/pdfs/Subject%20Matter%20Articles/Drugs%20and%20Alc/ACE%20Study%20-%20OriginsofAddiction.pdf>
- xlviii <https://www.thisamericanlife.org/474/back-to-school>
- xlix <https://acestoohigh.com/2012/10/03/the-adverse-childhood-experiences-study-the-largest-most-important-public-health-study-you-never-heard-of-began-in-an-obesity-clinic/>
- l https://www.cdc.gov/media/releases/2012/p0201_child_abuse.html
- li <https://www.springshare.com/libguides/>
- lii <http://libguides.jsu.edu/libguidesbasics>
- liii <https://alwayslearninglibrarian.wordpress.com/2017/04/04/the-evolution-of-libguides/>
- liv https://guides.library.harvard.edu/libguides_best_practices/creatingyourguide
- lv <https://www.tandfonline.com/doi/pdf/10.1080/19325037.2018.1465864>
- lvi <https://www.healthaffairs.org/doi/abs/10.1377/hlthaff.2016.0724>
- lvii <http://gradynewsouthern.edu/blog/2019/02/25/athens-clarke-county-library-becomes-first-trauma-informed-library-in-georgia/>
- lviii <https://www.socialworker.com/feature-articles/practice/public-libraries-add-social-workers-and-social-programs/>
- lix <http://publiclibrariesonline.org/2018/12/the-public-library-as-a-protective-factor/>
- lx <https://journals.sagepub.com/doi/10.1177/1524839917735304>
- lxi <https://osf.io/preprints/lissa/mva35/>
- lxii <https://www.ncbi.nlm.nih.gov/pubmed/26963957>



BUILDING STRONG BRAINS
TENNESSEE'S **ACEs** INITIATIVE

Resources

1 Government and Association Resources

2 Articles and Journals

3 Scholarly Publications

4 Media/Interactive Resources

Government and Association Resources

- Academy on Violence and Abuse, Cost of Adverse Childhood Experiences, https://www.avahealth.org/resources/aces_best_practices/lifetime-cost.html
- Administration for Children and Families, Children's Bureau:
Child Maltreatment Reports since 1995 to Present, <https://www.acf.hhs.gov/cb/research-data-technology/statistics-research/child-maltreatment>
Child Welfare Information Gateway, <https://www.childwelfare.gov/>
Building Trauma-Informed Systems and Policy Issues, <https://www.childwelfare.gov/topics/responding/trauma/building/>
How to Report Suspected Child Maltreatment, <https://www.childwelfare.gov/topics/responding/reporting/how/>
- Adverse Childhood Experience (ACE) Questionnaire <https://www.ncjfcj.org/sites/default/files/Finding%20Your%20ACE%20Score.pdf>
- Alberta Family Wellness:
Serve and Return, <https://www.albertafamilywellness.org/what-we-know/serve-and-return>
- American Academy of Pediatrics:
"Adverse Childhood Experiences and the Lifelong Consequences of Trauma," https://www.aap.org/en-us/Documents/ttb_aces_consequences.pdf
"The Resilience Project: We can stop Toxic Stress," <https://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/resilience/Pages/ACEs-and-Toxic-Stress.aspx>
- Tennessee Commission on Children and Youth's "Building Strong Brains Tennessee" Initiative, <https://www.tn.gov/tccy/ace/tccy-ace-building-strong-brains.html>
- Annie E. Casey Foundation, <https://www.aecf.org/>
- Centers for Disease Control and Prevention:
Adverse Childhood Experiences, <https://www.cdc.gov/violenceprevention/acestudy/>
Behavioral Risk Factor Surveillance System ACE Data, https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/ace-brfss.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Facestudy%2Face_brfss.html

CDC-Kaiser ACE Study,

<https://www.cdc.gov/violenceprevention/childabuseandneglect/acestudy/about.html?CD C AA refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Facestudy%2Fabout.html>

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- Transformative Culture Project, “Pathways to Health and Healing: Building a Trauma-Informed Workplace” Video, <https://www.youtube.com/watch?v=fn9pRqeTF2c>
- Trauma Recovery, “What is Resiliency” Video, <http://trauma-recovery.ca/resiliency/what-is-resiliency/>

- University of Massachusetts Boston, “Still Face Experiment: Dr. Edward Tronick” Video <https://www.youtube.com/watch?v=apzXGEbZht0>
- University of Minnesota Extension Children, Youth and Family Consortium, “Trauma Sensitive Practice in Schools” Video <https://www.youtube.com/watch?v=5ijW0oDDpao>
- WCTE Adverse Childhood Experiences Public TV Series: <https://video.wcte.tv/video/aces-episode-1-u7sgje/>
- Zero to Three: Early Connections Last A Lifetime, “Baby Brain Map” Interactive, <https://www.zerotothree.org/resources/529-baby-brain-map>