

Research Association of Minority Professors  
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**Presenter Information**

Title of the Presentation

The Effects of ACEs on the Brain in African-American Children

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Type of presentation

Undergraduate Student Presentation of Research

Abstract Summary of 100 words

Adverse childhood experiences (ACEs) are defined as traumatic events in a child's life from birth to 17 years of age. The adverse effects of ACEs are highest in African American communities (Zhang X, Monnat SM, 2021). ACEs can take a toll on a child's development, mental health, and education when he or she is categorized as high-risk. The toxic stress caused by ACEs can lead to permanent damage to the brain (Nakazawa, 2015, p. 32). This damage affects the child's present reality, such as their education and psychological development, and their future adult health unless intervention methods and protective factors take place.

**Abstract Content**

Title of presentation

The Effects of ACEs on the Brain in African American Children

Statement of the problem

A substantial number of African American children are impacted by Adverse Childhood Experiences (ACEs) because of being subjected to personal and many times trauma exposure which occurred intergenerationally (Zhang X, Monnat SM, 2021). The adverse effects are highest in African American communities with reports of ACEs in African American children being 33% higher than rates for white children (Ajani, 2022). These include physical, verbal/emotional, and sexual abuse and parental divorce, domestic violence, incarceration, substance misuse, and mental illness. Traumatic experiences can take a toll on the child's brain development. This means the child's chances of being successful in school are narrow. If a child struggles in school, he or she is at risk of failing in life as an adult. This literature review will examine how parents, teachers, and other important adults in life can intervene in the lives of African American children who suffer from ACEs.

The primary questions for this study are: What percent of African American children are affected by ACEs? What defines a child as "at risk"? How does "being at risk" affect their life? What are the effects

of ACEs on a child's brain? What can be done to intervene and reverse the negative effects from taking place?

#### Theoretical Framework

Resilience is the ability to withstand or recover quickly from difficult circumstances. Resilience theory includes several models that describe how promotive factors may counteract, protect against, or inoculate youth from the negative effects of risks (Zimmerman, 2013). Resilience theory argues that it matters more how we deal with trauma than the actual trauma itself. It answers the question of why children can grow up to be healthy adults despite the trauma exposure (Zimmerman, 2013). Resilience theory also argues that it matters more how we deal with trauma than the actual trauma itself.

#### Modes of inquiry

The findings for this literature review were discovered through a database platform as well as a Google search for several books pertaining to the topic. The sources include five of which came from the University of Louisiana at Lafayette database and two nonfiction books. The searches focused on defining ACEs and their effects on children and finding the preventive factors for African-American students. The following keywords were searched in various combinations. For the experiences mentioned above the terms included: "adverse childhood experiences" "childhood trauma" or "childhood neglect."

- For racial identity terms: "Black" or "African American"
- The target population keyword search included: "child" or "children" or "elementary students"
- Intervention search terms included: "preventive factors" or "prevention" or "resilience" or "prevention" or "educational resilience" or "intervention techniques for at-risk students" or "resilience"

#### Proposed Results, Conclusions, and Societal Significance of the Study

In almost every region of the U.S. ACEs are highest amongst black children (Sacks & Murphey, 2018).

There is a multitude of research that states that Black children have a large ACE level in comparison to white children. Furthermore, African Americans who grow up in poverty or poor neighborhoods have higher ACE scores than their counterparts. Also, the cycle of poverty keeps them from advancing economically because poverty can be a multi-generational circumstance (Ajani, 2022). When a child's brain is flooded with inflammatory neurochemicals deep psychological changes can occur and lead to long-lasting inflammation and disease (Nakazawa, 2015, p. 32). Also, when a child faces emotional adversity or stressors, cells in the brain release a hormone that shrinks the size of the brain's developing hippocampus which means that the child's ability to process emotion and manage stress is now altered (Nakazawa, 2015, p. 49). The adverse effects of ACEs have the potential to become long-term conditions that ultimately take a toll on the child's adult health unless intervention methods are put into place. Intervention methods such as mindfulness practices have been proven to produce positive results that reverse the negative effects of ACEs. Mindfulness practices like meditation, yoga, and mindful breathing can be implemented into elementary school curricula to ensure that every child has access to help no matter their socioeconomic background. This implementation can be done through parental consent forms and the school community's willingness to commit to such practices. The population that would benefit most from this implementation is at-risk African American students who are in poverty. At-risk students are those who suffer from 3 or more Aces. Since often the means to provide such opportunities as therapy are not available because of socioeconomic status, time, or means of transportation the best alternative would be to provide opportunities for intervention within schools where all children can have access to healing and a better future ahead.

