

**ADVERSE CHILDHOOD EXPERIENCES:**

**Childhood Trauma as a Source of Health and Educational Disparities**

**Introduction**

The correlation between health, both physical and mental, and the environment has been studied throughout time in many different ways and for many different purposes. These studies have yielded data that is relevant for various fields and applicable as an answer to the many challenges that current society faces.

The education field is one of great complexity as not every factor that a student experiences and deals with is constant throughout different geographical areas. Experiences and challenges faced by students in Portland, Maine are different from those faced by students in San Diego, California. It is because of this vast diversity in the nature of challenges and experiences faced by students that it requires a team effort from experts of different fields to try to understand the impact of these experiences in the long term with the goal of creating knowledge to create the best prevention strategies and practices. For students who are at-risk, it is especially important that their experiences be understood completely throughout developmental stages in terms of both physical and cognitive terms.

Adverse childhood experiences (ACEs) have only been recently understood to play a crucial role in health outcomes for children as they become adolescents and adults. This understanding has also made it clear that health and its impact on education are to be studied as a combined matter and not two standalone aspects of a person's life. For this reason, the research done to try to understand the impact of adverse childhood experiences is applicable to the

education field and can provide an understanding to educators about the students that they teach and the communities that they serve.

### **Definition and Extent of the Problem**

Interest in finding the causality of prevalent health conditions and disparities has been the goal of major health institutions across the United States. The Centers for Disease Control and Prevention (CDC), a government organization that funds scientific and medical research across the country, joined forces with Kaiser Permanente in the 1990s to try to find the root cause to some of the most prevalent health disparities (Boullier & Blair, 2018).

The CDC-Kaiser study began when Kaiser-Permanente found that there was a high rate of sexual assault survivors amongst patients who were attending their obesity clinic. This finding inspired what would become one of the largest studies to try to identify if lived experiences, specifically those lived during childhood, affected health outcomes. In this initial study, a questionnaire was designed to get participants to identify if they had experienced abuse, neglect, or household dysfunction as a child (Boullier & Blair, 2018). This survey yielded over seventeen thousand responses, which allowed for significant statistical analysis that is relevant for its continued application in today's society.

Since this original study was published, other research groups have replicated it and others have expanded the type of questions asked and the categories that are applicable as adverse childhood experiences. Most recently, the 2016 National Survey of Children's Health included questions about parental separation or divorce, parental death, witnessing household violence, witnessing neighborhood violence, household mental illness, household incarceration, household substance abuse, racial/ethnic mistreatment, and economic hardship (Crouch, Probst, Radcliff, Bennett, & Hunt McKinney, 2019). Out of the 45,287 children surveyed, the most

common adversity experienced was economic hardship (22.5%) and parent or guardian divorce or separation (21.9%) (Crouch et al., 2019).

The same survey also found key environmental features that increased the likelihood that a child will be exposed to adverse childhood experiences. For example, teens who were more likely to have been exposed to divorce, violence, and to life in a disrupted household than children in other developmental stages are more likely to develop, children whose family was not configured with two married parents were more likely to experience economic hardship, exposure to violence and to life in a disrupted household, finally, children living in a non-parental household had significantly higher odds of exposure to violence (Crouch et al., 2019). In terms of effect on health outcomes, it is reported people with greater than four ACEs have an increased risk for anxiety, depression, severe obesity, and alcoholism (Anda et al., 2006).

### **Analysis of Psychological and Social Dynamics**

Understanding of the social and psychological dynamics that lead children to be exposed to adverse childhood experiences is key in the journey to lessen their impact on the lives and outcomes of children. Based on the results from the studies of prevalence and impact of ACEs on children, the financial status of a family has a great influence on the likelihood that a child will experience toxic stress and adverse experiences.

A child's cognitive and socioemotional development are two areas that are essential for a successful life because of their potential to impact whether or not a child grows up to be an adult with chronic disease, high-risk health behaviors, mental health problems, and who, ultimately, may suffer an early death. These findings signal an urgent need to understand the ways in which the brain architecture is changed due to exposure to toxic stress during crucial developmental periods for brain development. Shonkoff & Garner (2012) explained that toxic stress has the

potential of not only creating direct changes in behavior that are immediately observable, but it also has the potential to create permanent changes to the brain structure due to the plasticity of the brain and its sensitivity to chemical and hormonal influences caused by environmental stressors. This is important in the long term as different regions of the brain that are affected by the toxic stress like are the amygdala, hippocampus, and the prefrontal cortex, also play important roles in other social and physiological functions that are key to living a long, healthy life. Long term changes in brain architecture have the potential to create permanent change in the regulation of stress at the molecular level, learning of new skills, and developing the capacity to make healthy adaptations to future adversity (Slack, Font, & Jones, 2016).

Sociological interactions can also influence and worsen the effects of toxic stress on children. In terms of other factors that can influence the predominance of ACEs in children, race has been studied thoroughly in various studies. Slack et al. (2016) studied the interplay of ACEs with race and income. These two factors play significant roles in the sociological experience that any human being lives at any point in their life. The study done by Slack et al. (2016) had the point of view of social work and found that in the state of Wisconsin, ACEs and adult income may partially mediate the relationship between race and health, at least for some health outcomes. Monnat, Chandler, and Sherman-Wilkins (2015) also tried to explore the impact of race on the severity of effects by ACEs. Furthermore, the study looked specifically at the rate of diabetes diagnoses by people of different races who had experienced at least one ACE. This study described that there is a positive association between parental divorce and diabetes for people of Caucasian descent. Interestingly, parental incarceration translated to worse self-rated health for whites and better self-rated health for blacks (Monnat et al., 2015). Sociological determinants of health require a much more thorough investigate lens in order to find

correlations like the ones that Monnat et al. (2015) found, which present to be relevant to prevent a negative health outcome like diabetes in the case studied.

It is with the thorough understanding of the social and psychological dynamics that cause adverse childhood experiences to take place that fields like education, public health, public policy, and medicine can work together to tackle these experiences at the root before they are permanent in the psyche and affect the brain structure of children.

### **Prevention and Intervention Strategies**

The high rate of correlation between negative, adverse childhood experiences and the health outcomes of the children affected by them make it necessary to implement strategies that aim to prevent these from taking place in the life of a child or intervene in order to minimize the effect on personal, educational and health outcomes.

Support from a parental or adult figure can be nurturing and is essential to teach children the necessary emotional and social skills to navigate stressful situations. Using the Bronfenbrenner's ecological system theory as a foundation, Traverso-Yeppez, Rourke, and Luscombe (2017) offer suggestions for action in the following areas: the microsystem, mesosystem, exosystem, and macrosystem. Actions at all of these levels have potential to influence the levels of adversity that a child faces and also can shorten or prolong the length of time and severity of the toxic stress. At early stages of life, parental education to promote healthy parenting skills is essential to create a positive environment that focuses on nurturing of the child, even when negative determinants of health like a low socio-economic status are present. In the mesosystem, the connection to professional practices and services is key. At this level, professionals come into play by advocating for nurturing environments for children and to implement early prevention interventions. At the macrosystem, where norms, policies and the

sociopolitical context of the country come into play, communities need to come together to emphasize the importance of policy that appropriates funding for programming and research that is aimed at decreasing the health gap between children and their potential (Ford et al., 2019).

Several attempts by research groups and healthcare professionals have been made to determine ways in which the adverse effects of ACEs can be lessened. Marie-Mitchell and Kostolansky (2019) found several components across many successful studies that improved outcomes for children who experienced ACEs. These components include parental education, mental health counseling, and, in some cases, home visits. The ultimate goal is to improve parental-child relationships and increase the access the professional services that connect families to resources needed.

Open communication between professionals, parents, and the child is necessary to lessen the impact of these adverse experiences. Negative and even tragic outcomes have been the result of miscommunication or lack of communication between professionals involved (Traverso-Yepetz et al., 2017). Overall, prevention and intervention require the work of professionals that know what to do in order to stop the degradation of health, educational, and personal outcomes for a child who has experienced toxic stress and adversity.

## **Conclusion**

Adverse childhood experiences have the potential to undermine the health, education, and life outcomes of a child. In order to prevent these from having such negative effect, it is important for professionals across all fields to work in unison to identify and intervene with best practices and policies. These swift actions will lessen the impact of ACEs and will teach the child skills necessary to deal with stressors for the rest of their lives.

In connection to at-risk and diverse learners, further research will need to look at factors like resiliency and competence in order to create educational prevention and intervention methods for those students who are already at risk because of their physiological and brain differences brought about because of ACEs.

## References

- Anda, R. F., Felitti, V. J., Bremner, J. D., Walker, J. D., Whitfield, C., Perry, B. D., . . . Giles, W. H. (2006). The enduring effects of abuse and related adverse experiences in childhood. A convergence of evidence from neurobiology and epidemiology. *European Archives of Psychiatry and Clinical Neuroscience*, 256(3), 174-186. doi:10.1007/s00406-005-0624-4
- Boullier, M., & Blair, M. (2018). Adverse childhood experiences. *Pediatrics and Child Health*, 28(3), 132-137. doi://doi.org/10.1016/j.paed.2017.12.008
- Crouch, E., Probst, J. C., Radcliff, E., Bennett, K. J., & McKinney, S. H. (2019). Prevalence of adverse childhood experiences (ACEs) among US children. *Child Abuse & Neglect*, 92, 209-218. doi://doi.org/10.1016/j.chiabu.2019.04.010
- Ford, K., Hughes, K., Hardcastle, K., Di Lemma, Lisa C. G., Davies, A. R., Edwards, S., & Bellis, M. A. (2019). *The evidence base for routine enquiry into adverse childhood experiences: A scoping review* doi://doi.org/10.1016/j.chiabu.2019.03.007
- Marie-Mitchell, A., & Kostolansky, R. (2019). A systematic review of trials to improve child outcomes associated with adverse childhood experiences. *American Journal of Preventive Medicine*, 56(5), 756-764. doi:10.1016/j.amepre.2018.11.030
- Monnat, S. M., Chandler, R. F., & Sherman-Wilkins, K. (2015). Do adverse childhood experiences hurt blacks worse than whites?: Race, family environments, and health. *Conference Papers -- American Sociological Association*, 1-37.
- Slack, K. S., Font, S. A., & Jones, J. (2017). The complex interplay of adverse childhood experiences, race, and income. *Health & Social Work*, 42(1), e31. doi:10.1093/hsw/hlw059



Traverso-Yepetz, M., Rourke, L., & Luscombe, S. (2017). Connecting the dots: An ecological lens to preventive measures for adverse childhood experiences. *Social Work in Public Health, 32*(5), 339-354. doi:10.1080/19371918.2017.1295897