

## **Executive Summary: Toxic Stress**

Toxic stress is not clinically quantifiable, measured by the probability that it exists, impacts brain development, and we suspect it may affect nearly 50 percent of the U.S. child population and 41.4 percent of children in Wisconsin. The adverse childhood experience (ACE) score, a common metric for measuring the probability of a child experiencing toxic stress, is a relatively new area of study in empirical literature. Thus, there has not been extensive research on the many ways in which toxic stress influences the lives of children. Though prevalent across racial groups and income strata, ACEs are concentrated amongst Black children and those in low-income households (Bethell et al 2017). In Wisconsin, those groups also underperform on standardized tests and graduate at lower rates compared to White and higher income students. Therefore, if toxic stress negatively affects academic achievement, interventions that mitigate those negative effects could plausibly reduce academic achievement disparities in Wisconsin.

The literature on the impact of ACEs on academic achievement is not extensive. However, there is empirical evidence to suggest that toxic stress negatively affects brain development and separate evidence that a lack of brain development has an impact on educational outcomes. Another connection, while not proven to be causal, is the impact of ACEs on ADHD diagnoses and the subsequent negative impact an ADHD diagnosis has on educational outcomes, in addition to a host of other negative consequences. Thus, by highlighting how some of the effects of toxic stress are connected to academic achievement, the relationship between toxic stress and academic achievement can be elucidated. Piecing apart the ways in which toxic stress affect academic achievement will allow policymakers to

Jon Harper  
jonharper02@gmail.com

identify opportunities for interventions that can mitigate some of the deleterious consequences.

Unfortunately, the literature on effective interventions that mitigate the effects of toxic stress is also not extensive. Some classroom interventions have yielded positive results, but the small sample sizes make generalizing difficult. The Department of Public Instruction highlights Trauma Sensitive Schools as a way to support students who have experienced toxic stress. These school-wide interventions are difficult to measure due to the variability of implementation across school sites; thus, the quantitative outcomes here are also scarce. That said, there are qualitative findings that support the efficacy of school-wide approaches both in and outside the U.S.

The literature indicates that toxic stress is most effectively addressed in early childhood when prevention is still possible. However, that does not mean elementary, middle, and high schools are absolved of their responsibility to support students. Faculty and staff at Trauma Sensitive School share a common understanding of toxic stress and its effects, and this is the groundwork needed for the successful implementation of evidence-based interventions in the future.