Defang ACEs: End Toxic Stress by Developing Resilience Through Physician-Community Partnerships

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In addition to our top finalist, the Editorial Board of Pediatrics *and the Editorial Board of the SOPT Monthly Feature are proud to present the article that took second place in the First Annual Advocacy Essay Competition, written by Dr Amanda Jichlinski. Her article explores the intricacies of toxic stress through a comprehensive overview of the topic. Dr Livaditis and Dr Jichlinski's articles mark the beginning of a short series on toxic stress, with several additional articles to be published in the next volume of* Pediatrics.

Catherine Spaulding, MD, Editor, *Pediatrics*, SOPT Monthly Feature

Strength does not come from physical capacity. It comes from an indomitable will.

Mahatma Gandhi

When I was 12, my parents became part of the Maryland foster care system. Over many years, we took care of a total of 6 boys who had been placed in foster care. Some had suffered from physical and sexual abuse, others from neglect. Often, their parents struggled with mental health and substance use disorders. The traumas my siblings had experienced had clear impacts on their immediate mental and physical health. What we did not know was that these adverse experiences could also have negative repercussions on their health as adults.

Pediatricians often care for children who endure abuse, neglect, household dysfunction, and the hardships of extreme poverty. These experiences are not only punishing for the child but are also linked to the leading causes of death in adults. The seminal Adverse Childhood Experiences Study published in 1998 screened for 7 adverse childhood experiences (ACEs), defined as childhood psychological, physical, or sexual abuse; living with a household member suffering from substance abuse, mental illness, and/or physical abuse; or living with a household member participating in criminal behavior.[1] These exposures had a graded relationship with the child's future risk of alcoholism, drug abuse, depression, suicide attempt, smoking, and other health problems as an adult.[1] Because the leading causes of morbidity and mortality in the United States are illnesses impacted by health behaviors, with an estimated 40% of early adult deaths attributed to unhealthy lifestyles, these findings are of profound public health significance.[1–4] Nearly 2 decades later, the results of the study continue to be validated.[2]

ACEs impact health by inducing toxic stress, defined as intense, repetitive, and/or chronic stress that supersedes normal levels caused by daily challenges.[2,4] Toxic levels of stress activate the sympathetic adrenomedullary system, in turn causing increased levels of stress hormones,

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including cortisol, norepinephrine, and epinephrine. Over time, chronically high levels of these hormones can lead to permanent organ dysfunction and structural changes in areas of the brain pertaining to anxiety, learning, and memory.[2,4]

Despite these harmful impacts, the outcomes of children exposed to ACEs vary widely. In part, this is attributed to genetic variability. But we also are beginning to understand that some individuals will thrive despite great adversity because of their individual resilience.[3,5]

In the research on toxic stress, to have resilience is the ability to withstand the adversity of childhood and, despite it, to have a life of fulfillment, happiness, and health.[5] As physicians, we can help children suffering from toxic stress by guiding our patients, their families, and our communities to identify and develop resilience through 3 critical steps: (1) identifying children at risk for toxic stress, (2) creating a network of support, and (3) building a community that promotes change.

IDENTIFYING CHILDREN AT RISK FOR TOXIC STRESS

Pediatricians cannot help patients develop resilience without first identifying children at risk for toxic stress. There are 2 main barriers to identification. The first is inadequate screening.[3] Researchers have found that only 4% of physicians screen for all 7 ACEs and 32% do not screen for any.[6] Lack of screening is attributable to inadequate residency training on toxic stress and time constraints in busy medical practices.[6,7] The American Academy of Pediatrics recommends implementing routine screening, similar to developmental screening, at certain designated well-child visits.[3] Questionnaires administered by nursing staff and reviewed with physicians, such as the Ages and Stages Questionnaires: Social-Emotional, can help identify children at risk.[8]

The second barrier to identifying at-risk children is that other forms of toxic stress exist beyond those included in questionnaires and ACEs studies. Patients who have had their parents deported, experience institutional racism, face sexual orientation discrimination, or suffer from food insecurity are all potentially impacted by toxic stress. However, these exposures are not always identified, causing children who may have toxic stress to go unrecognized. Although broad screening tools may help speed up a physician practice, it is important to recognize their significant limitations and the value of thorough conversations with patients and their families when screening for toxic stress.

CREATING A NETWORK OF SUPPORT

Once a pediatrician determines that a child is suffering from or threatened by toxic stress, the doctor must help the patient and his or her family connect to helpful social services. Linking patients and parents to therapy and comprehensive community services, including housing aid, legal assistance, food vouchers, and alcohol or drug treatment programs, can directly address the causes of childhood toxic stress.[3,4] The American Academy of Pediatrics and other groups have supported the idea of a medical home to facilitate these connections.[3]

However, building medical homes is not always immediately feasible. In addition, multiple members of the community, including teachers, social workers, and physicians, often work in parallel (but not in tandem) to tackle the causes of toxic stress on children. Creating coalitions to address toxic stress, as has been done to address other pediatric public health problems, could improve communication between providers.[9] In addition, it would address redundancy by allowing physicians and community members to work together to support at-risk children and their families. The resulting foundation of a strong safety network would improve the care of children and would help conserve energy and time, the most important human resources in the fight against toxic stress.

BUILDING A COMMUNITY THAT PROMOTES CHANGE

The third and most vital step in creating a strong culture of resilience is to involve the members of the communities we serve. These are the individuals who will identify the strengths of the residents that can be harnessed to help individuals impacted by adverse experiences.[10] Fostering opportunities for group discussions on the most significant stressors harming community members, whether they be violence, racism, or substance abuse, will help individuals become more resilient and will also empower residents to make our communities healthier.

My brothers are adults now. Two grew up with us. Out of the 4 who did not, 2 moved to a group home to receive intensive psychological support and care, and 2 were reunited with their family. The 2 who stayed developed some unhealthy behaviors in their teen-aged years but are doing better now. In their own way, without realizing it, I believe my parents helped them develop resilience. No physician ever had a conversation with my parents about ACEs or toxic stress, but through their own caring and with guidance from teachers and social workers, they made a positive difference.

Pediatricians should never see themselves as separate from the people they serve. We are part of the communities in which we work, and our work has a profound impact.

Preventing children from being exposed to abuse, neglect, and household dysfunction is paramount, and we can do so by addressing the causes of toxic stress in our communities. In addition, we must build resilience and ensure that children exposed to toxic stress are surrounded by a caring and consistent support structure.

Although we may become frustrated that transformation does not happen as quickly as we would wish, we should not underestimate our power to inspire, promote, and create positive change. By working together with patients and their families, we will help communities that are plagued by toxic stress become stronger and healthier in the years to come.

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ABBREVIATION

ACE: adverse childhood experience

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