

Research Doesn't Support Toxic Stress. And This is Worrisome

The toxic stress theory spawned trauma-informed approaches that science doesn't support. And activists use this theory to promote their attempts to transform social policy and public health.

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When I first wrote on the phenomenon of toxic stress in 2017 (Scheeringa, 2017), that post became one of the most frequently viewed blogs on my site.

I explained how experts believed that toxic stress was the most dangerous public health crisis in modern history and how they had leveraged it into a playbook for the transformation of society with something called trauma-informed approaches (TIA). Back then, I was still catching up to what these activists were trying to accomplish.

But after five years of research, I've learned a great deal. Upon initial examination, I discovered that a pediatrician named Jack Shonkoff invented the term "toxic stress" and used it as a marketing strategy (more on this below). Once he established this concept, he used his academic center at Harvard University to disseminate the TIA playbook to legislators, judges, and educators, which led to a slew of policy changes.

One of these changes included a proposition passed in California, which allowed it to become the first state in the nation to implement the screening of children for toxic stress (also known as adverse childhood experiences (ACE)). The cost to taxpayers? \$40 million.

And among the general populace, toxic stress has become the latest psych buzzword – a disorder that, some assert, has touched a good portion of the population. The book *The Body Keeps the Score* (van der Kolk, 2014) espoused that trauma changes the anatomy of brains and the very core of who people are. It has become the most popular book on psychiatry ever. Another book, *What Happened to You* by Bruce Perry and Oprah Winfrey, made similar claims and made the best-seller lists in 2021.

There are countless ways that activist scientists and clinicians have promoted toxic stress. But if research does not support toxic stress, why do experts accept it as fact? What are they overlooking?

1. Correlation is not causation.

Researchers have published many cross-sectional studies that show *correlations* between neurobiology and posttraumatic stress disorder, but correlations do not prove causality. The only way to know causation is to examine the neurobiology of individuals *before* they are exposed to trauma and then examine the subjects a second time after they are exposed to trauma and develop PTSD. These are called pre-trauma prospective studies. I published a review of all these studies in 2021 and found that **nearly all of them failed to support the toxic stress theory** (Scheeringa, 2021).

2. Toxic stress was invented by researcher and clinician activists.

Toxic stress is not a scientific term. Jack Shonkoff, a pediatrician at Harvard University, invented it. In 2003, Shonkoff created the National Scientific Council on the Developing Child at Harvard University, a private group of scientists and stakeholders in early childhood whose mission is to close the “gap between science and policy.”

Their public progress report gives the detailed history of where the term toxic stress came from. Essentially, members of the Council agreed to create and disseminate the phrase “toxic stress” to convey their message to the public because, by their own admission, “just saying ‘stress’ more loudly wasn’t going to get them where they needed to go” (Center on the Developing Child, 2014).

To highlight the alleged danger of toxic stress, they created two other types of stress: positive stress and tolerable stress. However, neither of these designations were based on validation from science.

3. Activists needed a scientific concept to support their goals.

Why did Shonkoff and his Council go to such great lengths to promote toxic stress? By the late 1990s, it had become clear that maltreatment, violence, poverty, and other disparities were stubbornly resistant to modern laws and public health efforts. Despite much progress in controlling these scourges, prevention activists realized that progress had hit a wall. Moreover, advocates realized that they did not have a powerful enough message to get them to the front of the line for funding their wish-list of prevention programs.

Then lightning struck in 1998 when Dr. Vincent Felitti and his group invented the adverse childhood experiences (ACE) model by showing a correlation between ACEs and severe medical disease in adults. It is noteworthy that this study - and all the many ACE studies that followed - were cross-sectional with no power to explain causation.

Nevertheless, this brainchild, combined with the toxic stress invention, formed a wide-ranging narrative that psychological trauma permanently damages the human brain and body. With a clearly defined “enemy”—psychological trauma—that was physically toxic to the human organism, activists finally had the poisonous snake in the grass that could, perhaps, get everyone’s attention.

4. Activists learned to weaponize neuroscience.

These research activists have explored new ways to leverage their message to transform social policy and public health in the past decade. For example, in 2015, Baltimore erupted in violent riots following the death of an African American man in police custody.

The Baltimore City Health Department responded with a Mental Health/Trauma Recovery Plan that included a trauma-informed series of transformations, demanded more funding for public health programs, and provided trauma-informed care for every front-line employee in the city.

Then, in 2017, a coalition of activists in New Orleans created a new strategy to grapple with the entrenched violence and poverty in that city. The local newspaper published a series of front-page articles and videos to profile a football team of nine- and ten-year-old boys. These articles claimed that the boys were at risk for failure in life, with toxic stress being the underlying cause of all their problems. The series was then yoked to a city council resolution that created the foundation for a broad expansion of government programs and funding.

And in 2019, a Congressional subcommittee gathered evidence in public meetings on the Trump administration's practice of holding illegal immigrant children separate from their parents. Shonkoff and the American Psychiatric Association president testified against this policy by claiming that being temporarily separated from parents in an immigrant holding camp is toxic enough to permanently damage children's brains for the remainder of their lifetimes.

The implications cannot be understated. By identifying trauma as the danger that we could all agree was evil, *brains could literally be saved*. Toxic stress has become a finely tuned message of healing the massive and complicated problem of class, social, and racial disparities.

And yet, toxic stress doesn't actually serve disadvantaged people the way these activists hope it will. In my twenty-nine years of practice, I've observed that clients often can only start long-term healing once they learn that their diagnoses are not someone else's fault but are instead due to the different way their brains are wired.

In these instances, relief comes when they understand that nature, not nurture, is the cause of their suffering. And that, once they receive the correct diagnosis, they have access to effective tools to help them heal and overcome their suffering.

Of course, the issue isn't just that clients are misinformed, but that well-meaning scientists are promoting a fallacy to further entire social policies and public health campaigns. And while it is understandable that they would do whatever it takes to help the disadvantaged, does the end justify the means if those who are suffering still don't get the help they need? Does it justify tens of millions spent in taxpayer money if there is no scientific evidence that their approaches will do what they hope? Surely, we scientists can do better.

References

Center on the Developing Child at Harvard University (2014). "A Decade of Science Informing Policy: The Story of the National Scientific Council on the Developing Child."

Scheeringa MS (2017). Trauma-Informed Approaches: The Good and The Bad, 9/17/17. Psychology Today blog

Scheeringa MS (2021) Reexamination of diathesis stress and neurotoxic stress theories: A qualitative review of pre-trauma neurobiology in relation to posttraumatic stress symptoms. International Journal of Methods in Psychiatric Research 30:e1864. doi: 10.1002/mpr.1864

van der Kolk BA, The Body Keeps the Score: Brain, Mind, and Body in the Healing of Trauma (Penguin Books, 2014).