

Childhood violence and the Whac-A-Mole effect



Many people and organizations focus on preventing violence with the belief that if our society can stop violence against children, then most childhood trauma will be eradicated.

However, research that has emerged over the last 20 years clearly shows that focusing primarily on violence prevention – physical and sexual abuse, in particular – doesn't eliminate the trauma that children experience, and won't even prevent further violence.

"Although violence can beget violence, it's hardly the only cause of violence," says Dr. Vincent Felitti, co-principal investigator of the [CDC-Kaiser Permanente Adverse Childhood Experiences Study \(ACE Study\)](#), groundbreaking epidemiological research that showed a [direct link between 10 types of childhood trauma and the adult onset](#) of chronic disease, mental illness, violence and being a victim of violence, among many other consequences.

"Basically there's lots of other ways," he says. "Humiliating people. Isolating people. Verbally provoking them. All of those have potential for producing violence in response."

In addition, violence can provoke nonviolent behavior that can be just as damaging as violence.

In other words, childhood trauma does not equal only violence.

The many types of childhood trauma

Violence is just one among many types of childhood trauma. The ACE Study found that violence is not more – or less -- damaging than divorce, living with a parent who's an alcoholic, being yelled at nearly every day of your childhood, or emotional neglect. Just as important, it rarely happens alone. If a child is experiencing violence, there's usually some other type of trauma happening, too.

In fact, the entire approach to preventing violence against children – by focusing on only one type of trauma, by focusing on the child and ignoring the parents or caregivers, by ignoring the toxic stress imposed on the child and family by traumatizing systems – is so outdated that pioneers in this arena compare our current approach to a never-ending game of [Whac-A-Mole](#).

They propose a completely different approach, one that focuses on creating and growing resilient children, families, organizations, systems and communities. It's an approach that moves from blame, shame and punishment, to understanding, nurturing and healing.

The ACE Study is part of what's being called a "unified science" of human development that recasts our understanding of how to solve our most intractable problems, such as poverty and homelessness, as well as childhood trauma. It comprises five areas of research:

- the epidemiology of adverse childhood experiences (ACEs),
- the neurobiology of toxic stress (the brain),

- the biomedical consequences of toxic stress (the body),
- the epigenetic consequences of toxic stress (passing response to toxic stress as well as health effects from parent to child),
- and resilience research.

Others call this “the theory of everything” in human development or NEAR science (neurobiology, epigenetics, ACEs, resilience). I just call it ACEs science.

The first part of this ACEs science is the ACE Study, which revealed that ACEs contribute to most of our major chronic health, mental health, economic health and social health issues.

It measured five types of abuse and neglect: physical, verbal and sexual abuse; physical and emotional neglect. And five types of family dysfunction: a family member with mental illness, or who has been incarcerated, or is abusing alcohol or other drugs; witnessing a mother being abused; losing a parent to divorce or separation.

Of course, there are other types of childhood trauma, and subsequent ACE surveys include other types of trauma. These include racism, bullying, witnessing a sibling being abused, witnessing violence outside the home, living in an unsafe neighborhood, experiences unique to being an immigrant (such as losing a parent to deportation), and involvement with the foster care system.

ACE Study revelations

The results of the ACE Study stunned Felitti, who was then chief of Kaiser Permanente’s revolutionary Department of Preventive Medicine in San Diego, CA, and the other principle investigator, Dr. Robert Anda, a CDC physician and epidemiologist who’d been studying how depression and feelings of hopelessness affect coronary heart disease. Of the 17,000 mostly white, college-educated people with jobs and great health care who participated in the ACE Study, 64 percent had an ACE score of 1 or more; 38 percent had an ACE score of 2 or more; 12 percent had an ACE score of 4 or more (i.e., four out of the 10 different types of adversity).

Looked at another way, the ACE Study also showed that ACEs usually don’t happen alone. If a person had one ACE, there was an 87 percent likelihood that they were likely to have another, and a 50 percent likelihood that two other categories were present.

The researchers were also surprised to see that the higher a person’s ACE score, the greater the risk of chronic disease and mental illness. For example, compared with someone who has an ACE score of zero, a person with an ACE score of 4 is 12 times more likely to attempt suicide, seven times more likely to become an alcoholic, and twice as likely to have heart disease. People with a score of 6 or higher have shorter lifespans – 20 years shorter.

The other surprise was that it didn’t matter what the types of ACEs were. An ACE score of 4 that included divorce, physical abuse, an incarcerated family member and a depressed family member had the same statistical outcome as an ACE score of 4 that included living with an alcoholic, verbal abuse, emotional neglect and physical neglect.

“We studied a whole range of outcomes — emotional, social, financial, biomedical, etc. If someone had an ACE score of 2 or 4 or 7, it didn’t matter how you made the ACE score up. It didn’t matter. That was unexpected and a surprise,” says Felitti.

“We do need to stop violence,” notes Dr. Christina Bethell, professor of population, family and reproductive health at Johns Hopkins Bloomberg School of Public Health. “We also need to address other ACEs that occur with or without violence.”

Bethell directs the [National Maternal and Child Health Data Resource Center](#), part of the [Child and Adolescent Health Measurement Initiative](#) (CAHMI). The [Maternal and Child Health Bureau](#) (MCHB), part of the U.S. Department of Health and Human Services Health Resources and Service Administration, sponsors the [National Survey on Children’s Health](#) (NSCH).

This survey asks parents a series of questions about their children. Although the survey obviously can’t get accurate data about children who have experienced physical or sexual abuse from their parents, it does obtain information from parents as to whether their children had witnessed violence in the home.

The data show that 85% of children who witness violence experience other ACEs, says Bethell. These other ACEs include parental divorce or separation, living with a family member who’s an alcoholic or abusing other drugs, witnessing violence outside the home, living with a family member who has a mental illness, a parent who’s been incarcerated, racism, or the death of a parent. According to the survey, [almost half the nation’s children have experienced at least one ACE](#). That’s 35 million children.

Other ACE surveys, including the 32 states that have done their own ACE surveys plus a number of cities and organizations, have convinced a growing number of early adopters in the scientific community that focusing only on violence prevention is short-sighted.

“It’s not clear to me that we know what categories of trauma are more or less damaging than another,” says Dr. Robert Whitaker, a pediatrician and professor of pediatrics and public health at Temple University. Whitaker has done research on the consequences of ACEs, as well as resilience research.

“There’s this notion in the public’s mind that physical or sexual abuse is somehow more harmful than verbal abuse or other types of trauma,” he says. “The scientific evidence does not support that. I think parsing out the impacts of different types of trauma leads to a kind of reductionism that may be neither necessary nor important for holistic treatment of children and families.”

The brain science that shows why ACEs have such dire consequences also bears out the ACE Study findings that violence is but one of many types of trauma that cause damage.

Toxic stress

Five years before the first of many papers from the ACE Study was published in 1998, [Dr. Bruce McEwen at Rockefeller University, with Dr. Eliot Stellar, used the term “allostatic load”](#) to describe how repeated chronic stress – “toxic stress” – produces stress hormones that create wear and tear on the brain and the body.

Over the last five years, the concept of the effects of toxic stress on children was amplified by Dr. Jack Shonkoff at the [Harvard University Center on the Developing Child](#). He and his team describe three types of stress: Positive stress, which children need to help them grow and thrive. Tolerable stress, which is temporary, and where a caring adult helps a child to recover. And toxic stress -- extreme, frequent or extended activation of the body’s stress response without the buffering presence of a supportive adult.

This toxic stress – the kind that comes from living with a physically and verbally abusive alcoholic parent, for example – damages the function and structure of a kid’s brain. Toxic stress floods the brain with stress hormones. When a kid’s in fight, flight or freeze mode, their thinking brain is offline and doesn’t develop as it should.

Kids experiencing trauma act out. They can’t focus. They can’t sit still. Or they withdraw. Fight, flight or freeze – that’s a normal and expected response to trauma. So they can’t learn. Their schools respond by suspending or expelling them, which further traumatizes them.

When they get older, they cope by drinking, overeating, doing drugs, smoking, as well as over-achieving or engaging in thrill sports. To them, these are solutions. They’re not problems. Nicotine reduces anxiety. Food soothes. Some drugs, such as methamphetamine, are anti-depressants. So telling someone how bad smoking is for them isn’t likely to make much of an impression if it relieves anxiety.

Although we’re just beginning to learn the subtleties of the effects of different types of trauma on the brain, says McEwen, recent research shows how important it is to look beyond violence as the only type of trauma that has long-term health, social and economic consequences.

Observing external violence or violence within the family causes the hippocampus and the prefrontal cortex -- responsible for planning, thinking, and self-regulation -- to shrink, but the amygdala to grow, says McEwen. This indicates that the amygdala, which stores memories associated with traumatic experiences, grows because the child must become super-vigilant to survive.

“The child’s brain is waiting for bad things to happen,” he explains.

Then there is the experience of chaos, he says, which includes ACEs such as living with one or more family members who are depressed or alcoholic or addicted to some other substance. Studies show that children of depressed mothers have enlarged amygdalae that result in the children developing anxiety and depression.

Other research shows that stressed adults who experienced harsh language in a harsh family environment when they were teenagers, show a dose-dependent increase in inflammatory mediators in the blood, says McEwen. The more stressful their childhood, the higher the stress response they show to current stress. And those markers can lead to many different types of diseases, he says, including heart disease, cancer and autoimmune diseases.

“This shows how ACEs get under the skin and have systemic effects on the body as well as what’s going on in the brain,” he says.

Overlooked factors

Donna Jackson Nakazawa wrote a book published last year that addresses this aspect of ACEs. It’s called [*Childhood Disrupted: How Your Biography Becomes Your Biology and How You Can Heal*](#).

“We’re trying to broaden our understanding to other factors that we’ve overlooked,” says McEwen. It’s beginning to be clear that anything that adds to allostatic load can damage children’s brains and bodies, and this includes financial insecurity that can lead to parents being forced to neglect their children because they have to work two or three jobs, noise, crowding, lack of green space, being homeless, hunger, unsafe housing, etc.

What the ACE Study did, says McEwen, was change our thinking about childhood. We used to believe that traumatic experiences that occurred when we were young – with the possible exception of physical violence -- didn't have much effect later on in life. Now there's no doubt that adverse childhood experiences are responsible for much of our behavior, our health and even our lifespan.

But even our understanding of violence is incomplete, according to the findings of the ACE Study and the brain research.

"Violence is simply a symptom of much deeper issues," says DeAngelo Mack, program coordinator for the [Sacramento \(CA\) Violence Intervention Program](#), which works with teens and transitional age youth 14-26 years old.

Mack says that violence is taught; it's a form of communication. "In the communities we serve we see that communication skills are lacking due to many reasons," he explains, "from parents who are young and underdeveloped in their own right, not having the tools and resources they need for themselves, which, in turn, makes it difficult to raise their children in a manner that gives them the attention needed to build strong communication skills."

In addition, overworked teachers in crowded public school systems don't have the proper tools to teach kids effective communication skills.

"Over my time doing this work," says Mack, "I have seen young people shot and at times murdered over situations that a simple sit-down conversation could have resolved. But because they don't know how to communicate, these kids use all their anger and hurt and confusion (from their ACEs) to express their feelings. Violence becomes their voice."

In the [March 2016 edition of the Journal of Child Psychology and Psychiatry](#), Dr. Martin Teicher, who heads the Developmental Biopsychiatry Research Program at McLean Hospital, noted:

"Childhood maltreatment exerts a prepotent influence on brain development and has been an unrecognized confound in almost all psychiatric neuroimaging studies. These brain changes may be best understood as adaptive responses to facilitate survival and reproduction in the face of adversity. Their relationship to psychopathology is complex as they are discernible in both susceptible and resilient individuals with maltreatment histories. Mechanisms fostering resilience will need to be a primary focus of future studies."

So, what to do? Our current Whac-a-Mole approach is to set up separately funded programs and independent organizations, each focused on preventing and/or reducing one type of trauma and/or coping mechanism: prevent violence, prevent verbal abuse, prevent racism, prevent gender discrimination, prevent bullying, prevent sexual abuse, prevent alcoholism, prevent obesity.

As each new ACE or coping mechanism appears, we continue this approach: prevent methamphetamine use, prevent opioid drug use; prevent sexual exploitation. For all these efforts, there's not a lot of success to show for it, or, if there is a decrease in one, another increases. Stop smoking, increase obesity. Stop methamphetamine use, increase opioid use. Stop physical violence, increase verbal abuse.

The Whac-A-Moles never disappear

Whitaker has an interesting take on how to move away from the never-ending Whac-A-Mole approach that builds a lot of points for hitting the mole, but the moles never disappear. “You have to look at this really complicated question about why people traumatize other people, why hurt people are hurting people,” he says. “There must also be some need there. If we prevent that need, the need to hurt, we can prevent that kind of hurt from happening.

“Stopping parents from spanking their kids is an honorable goal, for example. To use the Whac-A-Mole hypothesis, parents stop the spanking only to start something more socially acceptable and under the radar, like psychological abuse. The brain of the child might not distinguish between physical and psychological abuse any more than perpetrator who, having a need to fill, finds some other way to fill it.

“One of the things that I’ve realized in studying workplace trauma is that as a society, we went from slavery to indentured servants to child labor, all of which were inhumane. Now it seems that psychological trauma in the workplace going through the roof.

“The point here is that once a certain type of abuse is stopped, it will take on another form. If we make a hierarchy that says the psychological abuse is not as bad as physical abuse, then we will see a shift in the type of abuse, but maybe not the overall amount. It’s the way people can stop one addiction, but start another. To develop a new paradigm, you need to ask a new question: What would you need to do to take away the need to abuse yourself or others?”

Solutions

In the case of violence – or any other ACE -- the solution is not to focus only on stopping the violence; the solution is to provide children, families, organizations, systems and communities – all together -- with what they need to become healthy and thrive.

One good example to look at is the current trend in helping people who are homeless. ACEs and brain science shows us that people can’t plan or consider a future unless they’re using their thinking brain instead of their survival brain, and to do that, they have to feel safe. People who are homeless are pretty much by definition in survival brain nearly 24 hours a day, 7 days a week. It’s exhausting, depressing, frustrating, and produces extreme anxiety and hopelessness. Expecting them to abandon the alcohol or drugs that help them cope with depression, anxiety or rage before qualifying for a bed in a homeless shelter, and to “straighten out” in a few days or even a few weeks or months, is completely unrealistic. The projects that have greater success first provide sanctuary -- a safe and stress-free environment for those who are homeless -- and then, when they feel safe enough to be able to start thinking about their future, provide assistance and information about how to rebuild their lives.

One of the important ways to help children and families, says Dr. Sandra Bloom, psychiatrist at Drexel University School of Public Health and creator of the [Sanctuary Model](#), is to stop treating children apart from their families.

“Reality, and certainly what ACEs shows, is that you can’t address the needs of child separately from that child’s family,” she says. “They’re a unit. They’re one unit. There’s an absurdity in child treatment, that they’re treated separate from parents.”

The other is that despite the ACE Study, the neurobiology of toxic stress, the long-term biomedical and epigenetic consequences of toxic stress, our society still tends to treat children as if they're a different species from adults, says Bloom. It's as if there's no connection between being a child and being an adult.

But it's not just that our society treats children as if they're separate from parents, we treat parents as if they're separate from the systems that interact with them or the communities in which they live. Only by communities creating sanctuary for parents can parents create sanctuary for their children. And only by organizations creating sanctuary for their employees can those employees serve the people they're supposed to be helping, whether it's their patients, clients, students, prisoners or customers.

Focusing on building resilience

And for children and adults who've experienced trauma, that sanctuary promotes resilience to the stresses around them.

Resilience research is very broad. It encompasses individual resilience — such as how exercise, nutrition, being in a safe relationship, (for a child) being in an attached relationship with a trusted adult, living in a safe place, and mindfulness -- all contribute to a healthy brain and body. Resilience research also covers organization, system and community resilience.

Unfortunately, most of our organizations haven't caught up to ACEs science, says Jeannette Pai-Espinosa, president of the [National Crittenton Foundation](#), which has integrated ACEs into its work with thousands of girls, young women and their families across the U.S.

“Our ‘systems of care’ are more focused on problems/damage/rescue than prevention and a holistic approach to supporting families and addressing root causes,” she says. “A focus on damage caused by violence prevents us from using a broader approach to healing.”

Some progress is being made, however. [Trauma-informed schools](#) help students with high ACE scores increase their grades, test scores, graduation rates, sense of wellbeing, and hope for the future. [Pediatricians](#) and [social services](#) educate the parents they serve about ACEs science as a way to engage them in taking better care of themselves and in learning healthier parenting skills. [Trauma-informed judges in Safe Babies Courts](#) provide wrap-around services for families as a way of ensuring that children suffer no further abuse.

To get a glimpse of a future without ACEs, it's useful to look to past epidemics, says Felitti.

“Polio is a good analogy,” he points out. He recalled in his youth the March of Dimes campaign in which children brought dimes to school that were collected to buy more iron lungs for all the people who were contracting polio.

And then a group of people supported the efforts to create a vaccine.

“If we hadn't done that, we'd have marvelous iron lungs now, no doubt now with all sorts of digital capabilities,” says Felitti. “But we're a lot better off that the problem doesn't exist.”

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