

Under Our Skin

THE DEADLY SIDE EFFECTS OF CHILDHOOD TRAUMA

by Maria Taylor

Pioneering pediatrician and 2014 TED Talk speaker Dr. Nadine Burke Harris has made it her mission to raise awareness about an issue affecting children in underserved and poor communities throughout the country. Speaking in November at a HighScope-sponsored luncheon in Detroit, Harris detailed the effects “across a lifetime” of early childhood trauma, or Adverse Childhood Experiences (ACEs), which range from physical and emotional abuse to a parent’s mental illness or incarceration.

Harris delivered her address at the Detroit Regional Chamber of Commerce to an audience of many of the area’s leading educational, social service, and philanthropic organizations, including Enroll Detroit, Excellent Schools Detroit, Impact Detroit, Learning Care Group, Oakland County School District, Oakland University, The Skillman Foundation, UniDetroit, United Way, and Wayne County Regional Educational Service Agency (RESA). Just two months prior to her Detroit visit, Harris received the prestigious Heinz Award



Dr. Nadine Burke Harris, founder of the Center for Youth Wellness, is a leader in the movement to transform the treatment surrounding childhood trauma and toxic stress.

for the Human Condition; she was one of five “exceptional Americans” awarded the prize “for their creativity and determination in finding solutions to critical issues.” ACEs are indeed a critical issue for Harris, and she is on a mission to raise awareness about the long-term consequences of repeated early exposure to toxic levels of stress and to rally government resources and support for treatment and prevention of ACEs’ potential effects, including chronic health conditions, mental illness, violence, and early death.

The founder of the Center for Youth Wellness in San Francisco, Harris grew up in the Bay Area and attended medical school at UC Berkeley and UC Davis.

She earned her Master’s in Public Health from Harvard University, and then returned in 2002 to complete her residency in pediatrics at Stanford University. When she finished, she wanted to go somewhere where her work would really make a difference. She joined California Pacific Medical Center, a private hospital in northern California, and in 2007 helped open a clinic in Bayview-Hunters Point, one of the poorest, most underserved neighborhoods in San Francisco.

Until Harris set up the new clinic, there had been only one pediatrician to serve more than 10,000 children in all of Bayview. “So we hung a shingle, and we were able to provide top-quality care regardless of ability to pay. It was so cool,” Harris said. She and the staff were proud of their work. Still, she wondered if she was doing enough. In the population she served, the leading cause of fatality and years of life lost was violence. “We were doing a great job on health standards and outcomes,” she said, “but I asked myself, ‘Am I making a difference in their life expectancy?’”

Working at Bayview as a pediatrician, Harris started to notice a disturbing trend. A high number of children were being referred to her for ADHD (Attention Deficit Hyperactivity Disorder). But for most of them, she couldn't

People exposed to traumatic experiences in early childhood have a much higher chance of developing chronic health issues later in life — things like heart disease, cancer, or suicide.

make that diagnosis. What she did know was that almost all of them had experienced severe trauma in their home lives. Somehow, she thought, there must be a link between the two.

“One of the things that they teach you in public health school is that if you're a doctor and you see 100 kids that all drink from the same well, and 98 of them develop diarrhea, you can go ahead and write that prescription for dose after dose after dose of antibiotics, or you can walk over and say, ‘What the heck is in this well?’” she said. So she started reading everything she could get her hands on about how exposure to adversity affects children's developing brains and bodies.

Harris found her answer in the form of a decade-old research study, called the Adverse Childhood Experiences Study. What it showed was a striking correlation: People who were exposed to traumatic experiences in early childhood had a much higher chance of developing chronic health issues later in life — things like heart disease and cancer — and a greater incidence of suicide.

The survey came out in 1998, and was conducted by Dr. Vince Felitti at Kaiser Permanente and Dr. Bob Anda at the Center for Disease Control. Out of 17,500 people surveyed, 67 percent had at least one ACE. Twelve percent — one in eight — had four or more. And the researchers found a troubling link: the higher your ACE score, the worse your long-term health outcomes. For a person with an ACE score of four or more, their

relative risk of chronic heart disease was 2½ times that of someone with an ACE score of zero. For hepatitis, it was also 2½ times. The risk of depression went up 4½ times, and the risk of suicide, 12 times. And a person with an ACE score of seven or more had triple the lifetime risk of lung cancer and 3½ times the risk of coronary heart disease, the number-one killer in the United States.



Routine screening for ACEs — adverse childhood experiences — is part of Dr. Nadine Burke Harris' plan to combat the long-term health risks of early childhood trauma.

When the study came out, Harris explained, many people had looked at the data and said, “Come on. You have a rough childhood, you’re more likely to drink and smoke and do all these things that are going to ruin your health. This isn’t science. This is just bad behavior.” But Harris wasn’t so quick to dismiss the findings, because the science underlying the neurological effects of childhood trauma all added up.

The science behind the study has to do with the hypothalamic-pituitary-adrenal axis, the brain’s and body’s stress response system that governs our fight-or-flight response. “Imagine you’re walking in the forest and you see a bear,” Harris explained. “Immediately, your hypothalamus sends a signal to your pituitary, which sends a signal to your adrenal gland that says, ‘Release stress hormones! Adrenaline! Cortisol!’ So your heart starts to pound. Your pupils dilate, your airways open up, and you are ready to either fight that bear or run from the bear.” All that, of course, is great if you’re in a forest and there’s a bear. The problem, she continued, is when the bear comes home every night, and the system is activated over and over and over again. Then, instead of become life-saving, it becomes life-threatening. For children whose brains and bodies are just developing, it’s especially dangerous. High doses of adrenaline affect not only brain structure and function, but also a child’s developing immune system, their hormonal systems, their cardiovascular system, and even the way DNA is read and transcribed. At a young age, that might manifest as asthma or ADHD. Later in life, it could spell drug and alcohol abuse or cardiac disease.

Harris knew that the kids she worked with on a day-to-day basis lived with high levels of trauma in their family lives: abuse, neglect, domestic violence, or parents addicted to alcohol or drugs. This kind of trauma, the study revealed, isn’t something you just “get over” as you grow up. It impacts kids’ developing bodies and minds, leaving scars that only get worse over a lifetime.

To Harris, that discovery was a game-changer. In the past, she’d viewed these problems the way she and other pediatricians had been trained to view them: either as a social issue — referred to social services — or a mental health issue — referred to mental health services. “For me, this information threw my old training out the window,” she said. “When we understand the mechanism of a disease, when we know not only which pathways are disrupted but *how*, then as doctors, it is our job to use this science for prevention and treatment.”

Harris was quick to point out that this isn’t just an issue for kids in one San Francisco neighborhood. It’s happening all across the country — and it’s not being addressed, to the point where Dr. Robert Block, former president of the American Academy of Pediatrics, called it “the single greatest unaddressed public health threat facing our nation today.” That came as a surprise to Harris, who was ready to shout it from the rooftops. “I figured the minute that everybody else heard about this, it would be routine screening, multi-disciplinary treatment teams, and it would be a race to the most effective clinical treatment protocols,” she said. “Yeah — that did not happen. And that was a huge learning for me.” As it turns out, what she had thought of as simply clinical best practice turned out to be an entire movement, one that’s still underway.

In 2011, Harris left her job to become founder and CEO of the Center for Youth Wellness, a Bayview clinic that

works to prevent and eventually heal the impacts of toxic stress in children’s lives. Instead of treating only symptoms, Harris and her staff seek to address the stressful experiences that can make children sick. “Our mission is threefold: prevent, screen, and heal,” she said. As a screening tool, staff administer a survey that asks parents to identify how many adverse experiences their child has gone through. The more boxes that get checked, the higher the child’s score. For kids who test positive, there’s free treatment, including home visits, mental health care, nutrition, holistic

This kind of trauma isn’t something you just “get over” as you grow up. It impacts kids’ developing minds and bodies, leaving scars that only get worse over a lifetime.

intervention, and — when necessary — medication. There’s also a focus on educating parents about the impacts of toxic stress, the same way you would for lead poisoning or covering electrical outlets.

The US actually has a relatively strong track record with addressing public health issues, Harris said, from tobacco to HIV/AIDS. Childhood trauma is just as harmful. “Folks who are



Information for Families

These brochures are great to give to parents as an overview of the background, methods, and results of HighScope’s proven approach.

English ZB1194 | Spanish ZB1195 \$18/Set of 50

exposed in very high doses have triple the lifetime risk of heart disease and lung cancer and a 20-year difference in life expectancy...[and] dramatically

Instead of treating only symptoms, Harris and her staff seek to address the stressful experiences that can make kids sick.

increased risk for 7 out of 10 of the leading causes of death in the United States,” she pointed out. “In high doses, it affects brain development, the

immune system, hormonal systems, and even our DNA. I am talking about threats that are so severe or pervasive that they literally get under our skin and change our physiology. And yet, doctors today are not trained in routine screening or treatment.”

So why hasn't more been done? Harris had some theories. “At first, I thought that we marginalized the issue because it *doesn't* apply to us: ‘That’s an issue for those kids in those neighborhoods,’” she said. “Which is weird, because the data doesn’t bear that out.” Research shows that adversity in childhood is prevalent among all races and social classes. The original study was done in a population that was 70 percent Caucasian, 70 percent college-educated

— unlike the Bayview neighborhood, which is made up of primarily low-income African-American families.

The more Harris talked to people, the more she became convinced that people marginalize the issue because it *does* apply to us — and it’s just too uncomfortable to deal with. “If I were to ask how many people in this room grew up with a family member who suffered from mental illness, I bet a few hands would go up,” she said. “And then if I were to ask how many folks had a parent who maybe drank too much, or who really believed that if you spare the rod, you spoil the child, I bet a few more hands would go up. Maybe it’s easier to see in other zip codes because we don’t want to look at it. We’d rather be sick.”

Choosing to be sick, though, is becoming a less viable option every day, Harris said. The science is clear: Traumatic childhood experiences dramatically affect health across a lifetime. Today, we are beginning to learn how to stop the progression from early adversity to disease and early death. Speaking in Detroit, Harris laid out a three-part model for addressing ACEs: raising national awareness, screening for early detection, and training doctors to understand symptoms.

Thirty years from now, she predicts, the child whose high ACE score and behavioral symptoms go unrecognized, whose asthma management is not connected, and who goes on to develop high blood pressure and early heart disease or cancer will be just as out-of-the-ordinary as a six-month mortality from HIV/AIDS.

“This is treatable. This is beatable,” Harris said. “The single most important thing that we need today is the courage to look this problem in the face and say, ‘This is real, and this is all of us.’ I believe that we are the movement.”

More information about Harris and the Center for Youth Wellness, including a user guide for health professionals, is available at centerforyouthwellness.org. ■

HighScope executives Armen Hratchian, Brenda Leger, Cheryl Polk, and Steve Schwartz meet with Harris (center) after her presentation at the Detroit Regional Chamber of Commerce.

