

Thoughts Out of Season

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Dr. Arline Geronimus 2023

How ‘Weathering’ Contributes to Racial Health Disparities

WHEN DR. ARLINE GERONIMUS FIRST introduced the theory in 1990, her ideas were derided and largely ignored. Now, people are starting to listen.

For Arline Geronimus, avoiding the limelight had become a way of life.

Three decades ago, she put forward an idea that was unconventional for the time: that the constant stress of living within a racist society could lead to poor health for marginalized groups.

Dr. Geronimus, then a 32-year-old public health researcher at the University of Michigan, had spent three years gathering data on more than 300,000 pregnant women, in search of an explanation for the vast racial disparities in infant mortality rates. At the time, Black babies died more than twice as often as white babies in their first year of life. It was widely assumed that high rates of teen pregnancy among Black women were to blame.

Dr. Geronimus’s research showed otherwise: The babies of Black teens were healthier than the babies of Black women in their 20s and older. These younger women, she posited, had endured fewer years of racism-induced stress, and therefore had given birth to more robust children.

She called this particular form of chronic stress “weathering,” evoking a rock being eroded by constant exposure to the elements. She first presented her findings and the

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outlines of her hypothesis at the annual conference of the American Association for the Advancement of Science in 1990.

The backlash was immediate, and ran the ideological gamut. The Children's Defense Fund, a progressive organization that had knowledge about her talk ahead of time, set up a table outside to express outrage because they thought Dr. Geronimus's conclusion was that teen pregnancy was not entirely bad. "The policy implications of her arguments are perverse," a CDF representative told The New York Times a few weeks after her speech. A columnist at the Washington Times, a conservative paper, wrote "As Marie Antoinette might put it: Let them have babies." Michigan alumni pressured the university's president to fire her. She received death threats at home from anonymous callers.

"I was pretty traumatized," said Dr. Geronimus, now 66, over coffee at the New York Public Library in March. "So I kind of retreated into my work."

In the years that followed, Dr. Geronimus largely stopped going to conferences and rarely talked to reporters (she admitted that this interview was nerve-racking for her). But, with the University of Michigan's continued support, she has published more than 130 papers, expanding and bolstering the evidence for weathering well beyond Black mothers. She has studied Latina mothers, Mexican immigrants and white people in Appalachian Kentucky, among other groups, repeatedly showing that people experiencing high levels of chronic stress as a result of their identities and circumstances have poorer health outcomes. Simultaneously, researchers across disciplines have linked the relentless strain of discrimination to premature aging and dysfunction of the immune, cardiovascular, metabolic and endocrine systems.

That body of evidence, which Dr. Geronimus describes in her new book, "Weathering: The Extraordinary Stress of Ordinary Life in an Unjust Society," has turned her into an "icon" and provided a framework for understanding health inequities that goes deeper than blaming poor health on lifestyle choices or flawed genetics, said Dr. Marcella Nunez-Smith, a professor at Yale School of Medicine who chaired the White House Covid-19 health equity task force.

"There's a solid line from her work on weathering to what we now call social determinants of health," Dr. Nunez-Smith said. Weathering was the foundation of many of the task force's policy decisions during the height of the pandemic, which focused on reducing the excess stresses of the pandemic on people of color and low-income groups — like funding non-English speaking workers to help reach vulnerable populations for contact tracing, and switching from drive-through testing sites, which excluded those without cars, to walk-in options.

Covid is, in large part, why Dr. Geronimus, after years of turning down offers from agents, decided to re-enter the fray with her first book. In a grim affirmation of her work, the pandemic — with its disproportionately high numbers of deaths among people of color — has become one of the starkest examples yet of the effects of weathering.

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The pandemic also presented an opportunity for structural change, she said, which would help address health disparities that have only gotten worse since she published her first paper back in 1986.

The Trap of Chronic Stress

When the body is exposed to stressors, it goes into fight-or-flight mode, said Elizabeth Brondolo, a psychology professor at St. John's University who studies the psychophysiology of discrimination. Breathing, heart rate and blood pressure shoot up and the bloodstream is flooded with glucose and fatty acids to fuel the large muscles.

Over time, if the sympathetic nervous system reaction remains activated, it can erode internal systems, Dr. Brondolo said. Chronically elevated blood pressure can damage arteries and veins, which can lead to hypertension, for example. A constant stream of cortisol — known as the stress hormone — can create insulin resistance, leading to diabetes. Research has suggested that chronic stress can damage DNA and even alter brain structure.

Though many people feel stress on a day-to-day basis, surveys have repeatedly found that people of color and those with lower socioeconomic status report more severe and more frequent rates of stress. Research shows that these same groups often can't escape their stressors because they face a higher likelihood of violence, job instability and discrimination while lacking social or material support.

There's also a physically potent and persistent quality to race-based stress. In a series of studies between 1999 and 2009 and in clinical sessions, Dr. Brondolo and her colleagues examined the physiological impact of racist behavior, finding that the body and mind can't easily shake off its effects. In one study, for instance, participants who reported being on the receiving end of racist behavior experienced elevated blood pressure for an extended period, even while they were asleep. "That's really the key to what Dr. Geronimus is talking about — there was no recovery," Dr. Brondolo said.

Dr. Geronimus's research has found that upward mobility and wealth aren't antidotes for weathering. In one 2006 study, she analyzed the health data — including blood pressure, cortisol levels, liver function and cholesterol — of over 1,500 survey respondents and found that high-income Black women had worse health outcomes than low-income white women.

In a related case, when researchers from Ohio State University examined Black students who attended historically Black colleges and universities, they determined that those years of being "sheltered, at least somewhat, from racial discrimination," as they put it, put participants at a lower risk of health problems later on, compared with their peers who had attended predominantly white institutions.

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One explanation for these findings is found in the stress a person experiences when they try to thrive in an environment where their identity or circumstances are in the minority — what psychologists call “high-effort coping.” “The actual physiological energy it takes to succeed against all kinds of structural headwinds and barriers itself is weathering,” Dr. Geronimus said. It is one of the reasons Black maternal mortality rates remain stubbornly high, she said, even among high-income families — and even as Black teenage pregnancies have plummeted in the decades since her first study.

The Challenges and Critiques

A caveat for much of public health research is that it’s observational; it can identify links and associations but cannot prove causation, said Robert Kaestner, a professor at the University of Chicago Harris School of Public Policy who worked with Dr. Geronimus on a 2009 study on Mexican immigrants. When it comes to weathering, he said, not only is it “a difficult empirical task” to measure discrimination, it is also difficult to rule out other environmental stressors.

Despite his skepticism regarding its ability to be measured, Dr. Kaestner described weathering as “intuitive,” “plausible” and “consistent with biological processes.”

The intersection of health and racism is also a fraught research area that raises challenging questions about privilege and bias. That Dr. Geronimus is a white woman might have afforded her some credibility in that context, said Dr. Camara Jones, an epidemiologist at Rollins School of Public Health at Emory University, who served as a medical officer at the Centers for Disease Control and Prevention from 2000 to 2014.

“White people, in general, are given more credit when they’re naming racism,” she said. “When people of color do that, we are seen as having a chip on our shoulder or being subjective.”

In 1992, Dr. Jones had also shown a link between racism and accelerated aging in a study on blood pressure disparities. But she didn’t pursue this line of research for very long, in part because one of her advisers told her that she didn’t want to be “known as ‘the racism lady,’” she said. “Even when I was writing grant proposals, people would call me and say ‘Camara, can you just change the word racism to discrimination?’”

But Dr. Geronimus’s race doesn’t negate the importance of her research, Dr. Jones said.

“I’m grateful for her work because now the knowledge is out there.”

Putting Weathering Research to Use

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In March 2020, an immigration lawyer named Kari Hong contacted Dr. Geronimus with a question: Could her research help get detained immigrants out of confinement?

Ms. Hong was worried about her clients' exposure to Covid-19 in the close quarters of detention centers in California and Arizona, where they were being held. "One judge had said people who are uniquely vulnerable to Covid-19 should be able to get out," Ms. Hong said. "So then the question became, 'Well, who's uniquely vulnerable?'"

It was clear that older detainees and those with underlying health conditions would fall into that category. But for her middle-aged clients, the health risks were less clear.

Dr. Geronimus agreed to help. She wrote up legal declarations for seven different cases. "It is my expert opinion that detainees younger than 65 who are Black or have been subjected to trauma and other forms of stress-mediated wear and tear based on their social identity or circumstances are biologically older than their chronological ages," she wrote, "and are more susceptible to experiencing Covid-19 infection in its most severe forms."

All seven detainees were released.

"Without Dr. Geronimus I wouldn't have had an argument at all," Ms. Hong said.

In "Weathering," Dr. Geronimus proposes other reforms that would decrease stress levels for people at risk, though she acknowledges some feel more realistic than others. These include deploying doulas to help reduce Black maternal mortality rates (a tactic that's already shown success in a few local programs across the country) and reinstating the Biden administration's expanded Child Tax Credits, which for many families reduced the hardship of making ends meet (Congress ended the program at the end of 2021).

The idea, Dr. Geronimus said, is to consider health equity even when developing policies "that do not, at first blush, appear health related."

"It does sound intractable at first — I've certainly had my periods of hopelessness over what can be done," she said. "But since these weathering stressors surround us, that means there are so many leverage points. You just have to be committed." ¹

¹ Entire article copied from:

Gupta, Alisha Haridasani, "How 'Weathering' Contributes to Racial Health Issues." *New York Times, Kindle Edition, Edition, Most Emailed*, April 16, 2023.