

New review explores how stress uniquely affects children



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Most research on the health effects of stress focuses on adults, but a new review looks at how stress uniquely affects children.

In the most comprehensive review of its kind to date, the University of California (UC) in San Francisco, USA researchers found robust evidence that stress occurring as early as before birth or as late as adolescence can affect multiple conditions in kids, from asthma to mental health to cognitive functioning.

The results appear Jan. 20 in the *Annual Review of Psychology*.

Among the most important findings:

- Stress can impact many areas at once - mental and physical health, learning and attention, behavior, and justice system involvement - though its effects are often studied in silos.
- Children exposed to similar stressors can experience different outcomes, influenced by factors like age, emotional regulation, caregiver-child relationships, and school and neighborhood quality.
- The health and well-being of caregivers can significantly influence how stress impacts a child.
- Interventions early in a child's life can improve their immediate and long-term health, while lowering long-term health and social costs.

The review analyzed research from 153 sources spanning 75 years to distill key findings about the health effects of childhood adversity on children before they reach adulthood.

Let's not wait until adults have heart disease, cancer, or end up in jail or on the streets to ask whether early childhood stress impacted their outcome. We can see the impact of stress on children right now, and the evidence suggests that, for some, we should intervene immediately to prevent later disease."

Nicki Bush, PhD, review's first author, UCSF professor of Psychiatry and Pediatrics

Turning stress on its head

Historically, studies on stressors like bullying or child abuse examined mental and physical health outcomes in isolation. However, stress can lead to poorer outcomes in mental health, developmental function, behavior, and academic and social skills, as well as physical indicators, all at once.

In part, this is because the biological mechanisms by which stress impacts health can affect multiple aspects of functioning. For example, brain scans show that childhood stressors can lead to smaller brain volumes, which are related to delayed development, behavioral problems, and worse academic performance.

"For too long, research on childhood stress has viewed physical and mental health as siloed, but, if we want to make a meaningful difference in children's lives, we need to rethink how stress impacts a child's overall health," said Bush. "Many of the same stress-induced biological processes that predict asthma and obesity are also associated with anxiety, ADHD, and worse academic performance."

Context is key

Often, factors outside a child's control influence how they respond to different levels of stress, a point that lacked rigorous evidence until recently, the review noted. These factors include a child's age, stage of development, their ability to regulate stress, family, and school and neighborhood quality.

"It is critical to understand how a child who is 6 years old responds to child abuse versus a 14-year-old," said co-author Alexandra Sullivan, PhD, an assistant professor in UCSF's Psychiatry and Behavioral Sciences Department. "New research allows us to know what interventions and when are most effective at helping those children reduce and potentially prevent adverse health outcomes."

Stressful experiences, such as bullying or parental conflict, can negatively impact health regardless of a child's background, but the severity of the outcome usually matches the severity of the stressor. Additionally, stress is unevenly distributed. Children of color often experience more stress from racism, and children in low-income families experience more stress from poverty, the review noted.

Whatever the cause, intervening early can help reduce adverse health outcomes and prevent future disease in children who experience stress, the researchers found. Notably, a strong caregiver-child relationship is especially powerful at buffering the effects of stress.

"Efforts to help support the caregiver-child bond, as well as bolster mental health for both adult and child in the prenatal and postnatal period, can have profound impacts across generations," added Sullivan.

So can government policies that support neighborhood safety, education, access to health care, and economic stability, the review noted. These include paid family leave, cash supports, expanded health coverage, home visiting, and quality early childhood education.

"It is no longer a question of how stressors like child abuse impact a child," said Bush. "We have tools that can help immediately and have a lasting impact, so let's start providing every child and family with the resources to be as healthy as possible."

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