

# Study finds hidden physical health costs for minority youth overcoming adversity

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When youth thrive despite difficult circumstances, they are usually lauded for their accomplishments. However, overcoming adversity may have a hidden physiological cost, especially for minority youth. A study

from the University of Illinois Urbana-Champaign looks at physiological changes among high-striving minority youth in early adolescence.

[The paper](#), "Skin-deep Resilience and Early Adolescence: Neighborhood Disadvantage, Executive Functioning, and Pubertal Development in Minority Youth," is published in the *Journal of Youth and Adolescence*. Authors are Allen Barton, Tianyi Yu, Qiujie Gong, Edith Chen, Gregory E. Miller, and Gene H. Brody.

"In the past decade, researchers have observed a phenomenon termed 'skin-deep resilience.' Historically, [youth](#) from disadvantaged backgrounds who 'beat the odds' were assumed to have universally [positive outcomes](#). They are achieving academically, avoiding problematic behaviors, and scoring well on psychological measures," explained lead author Allen Barton, assistant professor in the Department of Human Development and Family Studies and an Illinois Extension specialist in the College of Agricultural, Consumer and Environmental Sciences (ACES) at U. of I.

"Outwardly these youth are seen as resilient, but these emerging 'skin-deep resilience' findings suggest this success may come at a cost to their [physical health](#)," he continued.

Skin-deep resilience has appeared particularly in samples of racial and ethnic minority youth, who are more likely to experience various stressors such as discrimination, disadvantaged neighborhoods, and socioeconomic risk.

Studies exploring skin-deep resilience have found evidence of a health toll in outwardly resilient young adults from disadvantaged backgrounds, including higher risk of inflammation, immune cell aging, metabolic disorders, and chronic disease. But Barton and his colleagues wondered if physiological changes could be detected among high-striving minority

youth at even younger ages, such as [early adolescence](#).

"For 10-year-olds, trying to find indicators of wear and tear in the body can be challenging because youth at this age generally are not manifesting any clinical or subclinical symptoms yet," he said.

"Given that, in the current study, we examined whether accelerated puberty development could be one physiological change that might serve as an indicator of the skin-deep resilience pattern. Prior research has suggested that stressful conditions can result in earlier onset of puberty, as well as faster progression."

The researchers used data from the Adolescent Brain Cognitive Development study, a large-scale project conducted by the National Institutes of Health that follows 11,000 youth and their parents across 21 sites in the U.S. Barton and his colleagues analyzed baseline data from 9- and 10-year-olds, as well as follow-up assessments one year later. Their sample included 7,712 participants: 66% white, 13.4% Black, and 20.6% Hispanic.

As expected, high executive functioning—[cognitive processes](#) related to planning, problem-solving, and goal direction—at baseline was associated with positive outward adjustment, including fewer conduct problems and rule-breaking behaviors one year later among Black or Hispanic participants. However, for ethnic and racial minority youth that resided in more disadvantaged neighborhoods, high [executive functioning](#) was also associated with accelerated pubertal development.

This pattern did not appear for white youth, suggesting the additional stressors that ethnic and racial minority youth are more likely to encounter can result in high-striving [minority](#) youth being more susceptible to worsened physiological outcomes.

"Our findings lend support to the skin-deep resilience hypothesis for [minority youth](#) at this developmental stage. Early adolescents with high executive function that were residing in disadvantaged neighborhoods seemed to be doing really well with indices of behavioral adjustment over time, but their planful, regulated efforts may be taking a toll on their body," Barton said.

He noted these are preliminary findings and more evidence is needed about the physiological consequences of striving to be resilient, particularly at younger ages, and how to help youth going forward.

"We need to think about the importance of promoting [resilience](#) at multiple levels. Particularly for youth from disadvantaged backgrounds, things like self-regulation and striving are typically encouraged and prioritized because of their associations with positive psychological and behavioral outcomes. However, such striving can also operate as a double-edged sword that exacts a physiological toll on youth," Barton said. "We need to ensure these youth have individual, family, and community sources of support that allow them to be resilient above and beneath the skin."

**More information:** Allen W. Barton et al, Skin-deep Resilience and Early Adolescence: Neighborhood Disadvantage, Executive Functioning, and Pubertal Development in Minority Youth, *Journal of Youth and Adolescence* (2023). [DOI: 10.1007/s10964-023-01911-6](https://doi.org/10.1007/s10964-023-01911-6)

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