

Project to help at-risk youth conquer chronic stress

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Credit: AI-generated image ([disclaimer](#))

Stress can cause numerous physical and mental health problems, but for children, stress from problems such as discrimination or poverty are especially harmful because children have little control over these problems. Fortunately, a Penn State intervention program is being expanded for youth facing chronic stress.

Building a Strong Identity and Coping Skills (BaSICS) is a [program](#) developed by the Penn State CaRES Lab designed to teach low-income and minority preadolescent youth healthy ways of coping with stress and divert them from negative outcomes.

Martha Wadsworth, director of the CaRES Lab and associate professor of psychology, and her research team were recently awarded a \$1.1 million grant from the National Institute of Mental Health (NIMH) to expand and evaluate the effectiveness of the BaSICS program. If the team is successful in achieving its goals in the first two years of the project, it will receive an additional \$1.7 million from NIMH for the second phase.

According to Wadsworth, the BaSICS program began as a pilot study with 50 youth three years ago in a Harrisburg community marked by persistent poverty, violence, and poorly funded schools. It was introduced as part of the Harrisburg Academy summer program for youth and now includes sessions during the school year.

"Children living in these conditions are exposed to toxic stress, which can set them on a trajectory for lifelong health problems, both mental and physical," said Wadsworth. "Their brains and bodies are still developing, so toxic stress can 'get under the skin' and leave [children vulnerable to developing problems such as depression, post-traumatic stress disorder](#), and substance abuse, along with physical health complications such as asthma, diabetes, and cardiovascular disease."

According to Wadsworth, BaSICS is the first intervention program to integrate individual and collective coping skills training and positive identity development with the goal of promoting positive youth development. The program, aimed at children ages 10 to 12, is eight weeks long and community-based, taking place at youth-serving agencies in the children's neighborhoods.

"It is a prevention program designed to give these at-risk kids the tools they need to manage stressful situations and grow strong minds and bodies," she said. "We teach kids coping and problem solving skills, as well as how to join with others in their community to take social action. The children utilize their new skills and capacities to work towards making their little corner of the world a little safer, cleaner, or more beautiful."

Wadsworth explained the program is not just about helping children learn how to stay calm when they are upset. Rather, BaSICS incorporates insights from psychotherapy and empowerment theory and validates children's natural emotional responses to unfairness and injustice. "We acknowledge that it is normal to feel angry and frustrated in the face of discrimination and violence, and emphasize that what they do about these feelings is important and can lead to 'good' or 'bad' outcomes," she said. "We teach them an array of skills to take positive action instead of anti-social action in response to the stressful events they encounter every day."

The BaSICS program also helps kids explore their cultural and ethnic identities so that they can begin the task of figuring out who they are, where they came from, and where they are headed in the future. "We have kids in the group identify a problem or a need in their community and work together to come up with a solution," Wadsworth said. "These activities help meet a child's fundamental human need for belonging, purpose, and agency."

Starting in the fall of 2016, Wadsworth and her team will recruit 150 fifth- and sixth-graders from the Harrisburg area to participate in the new grant-funded project, which will be held after school in biweekly, eight-week sessions throughout the school year. Half of the children will be randomly assigned to participate in BaSICS and the other half of the children will not receive the intervention.

According to Wadsworth, both groups of children will participate in testing before the intervention starts, post-testing after completion of the program, and then follow-up testing six and 12 months later to see how long the changes are retained. In addition to assessing coping skill acquisition and [mental health problems](#), the team will measure the children's salivary [cortisol levels](#) in response to a stressful task in the lab. "Cortisol is the 'stress hormone' produced by the adrenal glands, which helps regulate the body's response to stress. Moderate cortisol responses to stress are beneficial, but cortisol levels that are very high or very low signal that their stress response system is not operating properly," Wadsworth explained.

The results from the pilot study are promising, and Wadsworth and her team are excited to expand the program. "In the pilot study, we observed positive changes in how the youth coped with stress and in their psychological symptoms.

"We also found that a large proportion of the 50 children in the program had blunted cortisol levels, meaning that their bodies were not mounting a physiologic response to something that should stress them out," said Wadsworth. "Blunted cortisol reactivity is not good—it is often found in children with severe depression and delinquent behavior. The remaining children in the [pilot study](#) tended to have exaggerated cortisol levels, which are generally associated with poor outcomes as well—often predicting anxiety and post traumatic stress symptoms and disorders."

Wadsworth and her team found that after participating in BaSICS, the children showed improved coping skills, reduced symptoms of anxiety and depression, and remarkably, improved cortisol patterns—the children with blunted cortisol levels were able to develop better physiologic responses to stress than before, whereas the children with exaggerated cortisol patterns were able to regulate themselves better following the stressor.

Wadsworth hopes that the results of this large-scale study will confirm their promising preliminary findings that psychosocial intervention can affect not only children's [mental health](#), but can also impact how stress affects their bodies. "These findings will help us develop powerful interventions for kids facing toxic [stress](#)—powerful enough to help in our efforts to combat income- and race-based health disparities," she said.

Provided by Pennsylvania State University

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