



For much of history, health care professionals have dealt with issues like substance abuse and mental health disorders by playing defense.

Problems were usually addressed as they appeared. A person struggling with alcohol addiction entered a rehab program. A child who was chronically unable to pay attention at school started seeing an occupational therapist. But while treatment in response to a problem can often be effective, it sometimes comes too late.

More than twenty years ago, a team of researchers at Penn State asked what would happen if they flipped the paradigm and went on offense: putting their efforts into preventing problems before they occur.

PREVENTATIVE BEGINNINGS

Back in the 1990s, Mark Greenberg was a developmental and child-clinical psychologist working with children who were experiencing anxiety, aggression, and other mental health issues. A decade earlier, he and Carol Kusché, a colleague at the University of Washington, had written the Promoting Alternative THinking Strategies (PATHS) Curriculum, a program for preschool and elementary schools that aims to enhance social and emotional development of all children.

But while these accomplishments were fulfilling, Greenberg was also interested in using

an emerging approach called prevention science as a way to help even more children and their families.

“The idea of using high-quality science to improve the lives of children and families, and to do this before there was a need for clinical treatment, really inspired me,” Greenberg says. “Instead of treating an existing problem, the idea was to build children’s resilience and protective factors so that we reduced the number of children that needed extra services for mental health issues, drug abuse, or school failure.”

In 1998, he brought this idea to Penn State as the Bennett Chair in Prevention Research in Penn State’s College of Health and Human Development. With a generous endowment from Edna Bennett Pierce—a Penn State alumna from the first freshman class of women admitted to the university following World War II—Greenberg and Bennett Pierce created what is now called the Edna Bennett Pierce Prevention Research Center.

“My primary goal in creating the Center was to promote the well-being of children and to reduce the prevalence of high-risk behaviors and poor outcomes in children and families through applying science to everyday practice,” Greenberg says. “We wanted to achieve this through cutting-edge research, training the next generations of prevention scientists, and reaching out to assist Pennsylvania communities.”

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An Ounce of Prevention

A Penn State research center looks to the future by stopping problems before they start.

by Katie Bohn



Mark Greenberg



Gregory Fosco

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In the twenty-plus years since its inception, the center has developed a wide variety of evidence-based programs to help children and families. The Family Foundations program, for example, provides training for expectant parents about effectively parenting as a team. The REDI program (Research-Based Developmentally Informed) aims to improve social and emotional skills in low-income preschool children. And PROSPER (PROmoting School-community-university Partnerships to Enhance Resilience) works with middle school students and their families to help students make good choices and promote family bonding.

Today, says Stephanie Lanza—director of the center and C. Eugene Bennett Chair in Prevention—the center is broadening beyond its early focus to include research on issues facing people at all stages of life.

“The center is built around this tradition of a need to understand the problems society is faced with today,” Lanza says. “While some issues like alcohol abuse and cigarette smoking unfortunately remain relevant, our research has also evolved to include more recent problems like the opioid epidemic and COVID-19. We are also looking at ways to promote overall happiness.”

Today, the center’s dozens of projects, helmed by more than sixty affiliated faculty, run the gamut from preventing substance abuse and promoting healthy eating habits to better understanding Alzheimer’s risks and using mindfulness techniques to help people of all ages flourish at home, school, and work.

Not surprisingly, the center responded quickly to the COVID-19 pandemic, initiating a number of projects assessing impacts on various populations. One study, for example, looked at increased risks of child maltreatment caused by added family stress during lockdown. Another is examining how researchers can best communicate with policy makers about the inequities that children and youth may be facing as a consequence of the pandemic.

BRANCHING OUT WITH TECHNOLOGY

Gregory Fosco, associate professor of human development and family studies and associate director of the center, says that regardless of a project’s theme, the use of technology to enhance the ability to collect data has become one of the center’s priorities.

In the past, Fosco explains, researchers might send out a one-time survey to collect data from a study’s participants, or use video to record a session of how a family interacts together. Now, with the ubiquity of smartphones and other devices, researchers have the opportunity to collect data not just on a day-to-day level, but potentially hour-by-hour.

For example, he says, a researcher studying alcohol use in college students may “ping” study participants daily, using an app on their phones to ask about their drinking and also about other behaviors and activities that may reveal patterns that could lead to alcohol use.

This allows us to understand life as it’s being lived, instead of in a lab setting that may not reflect real life,” Fosco says.

“If we can identify these day-level factors and moments, it could allow us to develop technologies that can catch them in the moment they are at risk and deliver an intervention right to the phone in their pocket. We become a companion to them rather than them having to wait to come to a session in our office.”

One project using tech in an innovative way is led by Sunhye Bai, an assistant professor of human development and family studies, who is exploring the use of dashboard cameras to record family conversations in the car as a way to gain real-life insights into how families communicate.

“Especially in middle childhood and early adolescence, the car ride is a time when kids open up and share, at least in my experience,” Fosco says. “If I was driving my son to a school activity, for example, I would learn more about what was going on in his life in those fifteen minutes than if I was going to sit down with him and chat over a milkshake. In those car rides, the guards get dropped.”

In addition to allowing researchers to gather data in different ways, technology can sometimes be a part of the solution.

Fosco is currently leading a team that’s developing a smartphone app intended to help parents connect with their adolescent children. The app will help families choose meaningful activities they can enjoy together, with the ultimate goal of reducing the adolescents’ risk of depression, problem behavior, substance use, and academic difficulties. For example, one activity encourages family members to share ways in which they are proud or impressed with each other. Another encourages parents to share stories about their own childhood with their kids, and for kids to reciprocate with stories or memories of their own. The project is a collaboration with Benjamin V. Hanrahan, assistant professor of information sciences and technology, an indicator of the center’s interdisciplinary approach.

A project Lanza is involved in is using Amazon Alexa devices to deliver mindfulness-based interventions to the homes of chronic pain sufferers.

“Now that everyone is carrying a smartphone, we can do studies that give us a better understanding not just of broad risk factors but of the more personalized, day-to-day events that may trigger a negative event,” Lanza says. “It allows us to be more precise in our interventions, and also allows us to deliver those interventions in a more immediate, personalized way.”

EXTENDING IMPACT

The center’s impact extends far beyond research being done at Penn State.

The PATHS® Curriculum created by Greenberg and his colleagues in the 1990s continues to be implemented in schools across the United States.

The center has a strong and long-standing partnership with the state of Pennsylvania, providing oversight, technical assistance and expert advice to help policymakers and agencies identify and fund prevention programs that are effective and ensuring that communities who adopt these programs are implementing them correctly.

“We see that as one of the ways we’re fulfilling the land-grant mission,” says Fosco. “There is some form of evidence-based programming supported by the center in every county in Pennsylvania.”

With support from private foundations, the center’s experts create policy briefs about social and emotional learning, and are working to understand how to most effectively translate prevention science for policymakers and other audiences.

Additionally, the center has received funding since 2005 from the National Institute on Drug Abuse for the Prevention and Methodology Training Program, which focuses on training the next generation of scientists in preventing substance use and addiction. Almost 100 of the program’s Ph.D. graduates have gone on to faculty positions in substance use or prevention science, seeding research institutions all over the country.

Twenty years on, it’s clear that the center is fulfilling Greenberg’s original vision—and that the benefits of prevention science have been firmly established. “People are more and more aware of the value of this approach,” Fosco says, “and this center has made a very important contribution to that.”



Stephanie Lanza

Patrick Mansell

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