Care before crisis

How ASU researchers are working to improve maternal mental health outcomes and protect child development

By Dolores Tropiano, ASU News
October 9, 2026

Story highlights

From digital innovations to behavioral interventions, researchers at ASU are working toward better maternal mental health outcomes — for both mothers and children.

ASU researcher says women need a more coordinated system of care that connects obstetricians, mental health professionals, doulas and pediatricians.

Postpartum depression impacts an estimated 1 in 8 women who give birth, and can have lasting effects on a child's well-being.

If you are experiencing severe anxiety or depression, hopelessness or symptoms of psychosis, please reach out to a health care provider or the national suicide and crisis hotline (call or text 988).

The recent murder trial of Lindsay Clancy, a Massachusetts mother accused of killing her three children, focused national attention on maternal mental health and the structures — or lack thereof — we have in place to support it.

“It's a classic example of how hundreds and thousands of mothers are struggling with severe depression, severe anxiety,” said Jyoti Pathak, founding dean of Arizona State University’s School of Technology for Public Health, “and are essentially slipping through the cracks of the system.”

Pathak and others at ASU are working to stop that from happening. From digital innovations to behavioral interventions, ASU News is taking a look at how they’re working to ensure the well-being of both mothers and children.

The postpartum problem

Postpartum psychosis, which Clancy was diagnosed with, and postpartum depression are distinct conditions, said Kathryn Lemery-Chalfant, a psychology professor in ASU's Department of Psychology who studies how and why postpartum depression develops.

Postpartum psychosis, which can cause a loss of contact with reality, is rare, affecting an estimated one to two women per 1,000 births. It typically begins soon after childbirth, and can involve extreme mood changes, hallucinations, delusions, paranoia, confusion and disorganized behavior. It is not simply a severe form of postpartum depression, Lemery-Chalfant said. Rather, it is a medical emergency requiring immediate psychiatric care, and a person experiencing symptoms should not be left alone with an infant or other children.

Postpartum depression is far more common, impacting an estimated 1 in 8 women who give birth. It can begin during pregnancy or at any point during the first year after childbirth. Symptoms can include severe anxiety, persistent sadness, hopelessness, loss of interest in activities one used to enjoy, exhaustion and difficulty functioning. And while it may not pose an imminent threat to a child's life, it can have lasting effects on their well-being.

Recognizing either condition can be difficult for many reasons.

Doctors generally focus on the physiological state of mothers during checkups, and individuals with mental health issues can be reluctant to talk about them because of stigma, fear or concern about how the information will be used. What's more, many are not even aware they may have a problem.

The fact that Clancy was aware of her psychological issue, and even shared about it with others, but still did not get the kind of care that could have prevented what happened points to the main problem: a detrimental lack of coordination in the system.

Delivering a solution

Better maternal mental health begins with identifying women who need help before their symptoms become a crisis. To do that, Pathak says, women need a more coordinated system of care that connects obstetricians, mental health professionals, doulas and pediatricians.

"A mother who does not discuss her emotional health with her obstetrician, for example, may later tell her child's pediatrician that she is having difficulty breastfeeding or bonding with her baby," he said. "Those concerns could prompt the pediatrician to connect her with a behavioral health provider."

Pathak, co-founder of Iris OB Health Inc., is researching how artificial intelligence and other digital tools could help identify women at risk of developing postpartum mood disorders during pregnancy and after childbirth.

The goal is not to diagnose patients or tell doctors how to treat them. Instead, the technology analyzes information already contained in patients' electronic medical records and alerts health care providers when someone may need additional attention.

Pathak's system categorizes patients as green, yellow or red based on potential signs of risk, with a yellow or red designation prompting a physician to ask more questions or connect the patient with mental health care.

"We're not dictating, 'Do this, do that, prescribe this, prescribe that,'" said Pathak, who leads research and education programs that use digital technology and data to improve health outcomes. "We're essentially just flagging it … giving the control back to the provider."

An alert could be incorporated into an ordinary prenatal appointment, along with conversations about blood pressure, nutrition and fetal development. That matters because obstetric providers are typically focused primarily on the physical health of the mother and baby, Pathak said.

"Mental health is not on their radar, so to speak," he said.

Why this research matters

Research is the invisible hand that powers America's progress. It unlocks discoveries and creates opportunity. It develops new technologies and new ways of doing things.

Learn more about ASU discoveries that are contributing to changing the world and making America the world's leading economic power at researchmatters.asu.edu.

Medical records can reveal warning signs that might otherwise remain buried. For example, a provider treating a woman during her second pregnancy may not know that she experienced a postpartum mood disorder with her first pregnancy. Technology could locate that history and bring it to the provider's attention.

But the approach has its limitations.

"If it is not documented in the medical record, there is no way for us to know," Pathak said.

Along with his team of researchers, Pathak is exploring whether information from wearable devices could help close that gap. Commercially available rings and watches can monitor changes in sleep, heart rate, mood and physical activity — possible indicators that someone is experiencing stress or emotional distress.

The devices would not provide a complete picture of a patient's mental health, Pathak said. They could, however, add another source of information that helps a provider recognize when a conversation may be needed.

The technology remains in the research stage and would require strong safeguards for consent, privacy and data security before it could be widely used.

Raising health outcomes for all

Most discussions about postpartum mental health focus on the mother, but another factor to consider is how untreated mood disorders can impact the child's development.

For the past 17 years, ASU's New Mothers Project has followed hundreds of Arizona families from pregnancy through their children's adolescence, researching biological factors that affect a mother's mental health, mother-child interactions and child development.

While the NIH-funded project — led by Department of Psychology Professor Linda Luecken along with a collaborative team including Keith Crnic, Nancy Gonzales, Marisol Perez and Lemery-Chalfant — began with a focus on postpartum depression, researchers later expanded it to examine the development of children's self-regulation, or the ability to understand and manage emotions, behavior and attention.

The project's findings indicate that postpartum depression can interfere with that development, said Lemery-Chalfant, a contributing researcher who examines factors that shape children's mental and physical health.

Infants rely on caregivers to regulate their emotions and behavior — to soothe them, feed them, help them sleep and engage them when they are alert. Through this process, called co-regulation, children gradually learn to manage their emotions and behavior on their own.

Postpartum mood disorders, however, can make it harder for mothers to provide that consistent support.

And those early difficulties can have lasting consequences. Children with lower self-regulation may have more trouble understanding and managing their emotions, forming relationships with peers and teachers and succeeding in school.

"The effects can continue into adolescence and influence children's social, emotional and cognitive development," Lemery-Chalfant said.

But not all children are affected in the same way.

A child's temperament also matters. Those with easygoing temperaments may be more resilient while children who are more emotionally reactive and have greater difficulty regulating themselves may need more support, even as postpartum mood disorders and stress make that support harder to provide.

But interventions that give mothers tools to respond effectively to their children can improve parenting while also reducing their symptoms, Lemery-Chalfant said. Additionally, some things that can help protect children include sensitive parenting, another supportive caregiver and high-quality childcare.

"The good news is that there are buffers," Lemery-Chalfant said. "Some children are more resilient to the effects of postpartum depression than others because of their easygoing temperaments. Also, parenting interventions work."

Researchers with the New Mothers Project now hope to take a closer look at the relationship between postpartum depression and children's language development. A federal grant proposal under review would allow them to analyze the project's videotaped parent-child interactions second by second, examining how parents' emotions encourage or inhibit children's language use.

The goal is to identify specific points where future interventions could reduce the effects of postpartum depression and support healthier development.

ASU resources for well-being

ASU Counseling Services includes 24/7/365 Open Call and Open Chat, as well as telehealth individual sessions for Sun Devils anywhere in the world, at any time of day or night. To learn more, visit Open Call and Open Chat and Where to Start.

Working Parent Network is an informal peer support group that offers a space to connect and share experiences about raising children. The group meets twice a month on Zoom: Educational meetings on the first Friday and community conversations on the third Friday, both from noon–1 p.m.

If you are experiencing severe anxiety or depression, hopelessness or symptoms of psychosis, please reach out to a health care provider or the national suicide and crisis hotline (call or text 988).

This story originally appeared on ASU News.

Main image



iStock photo