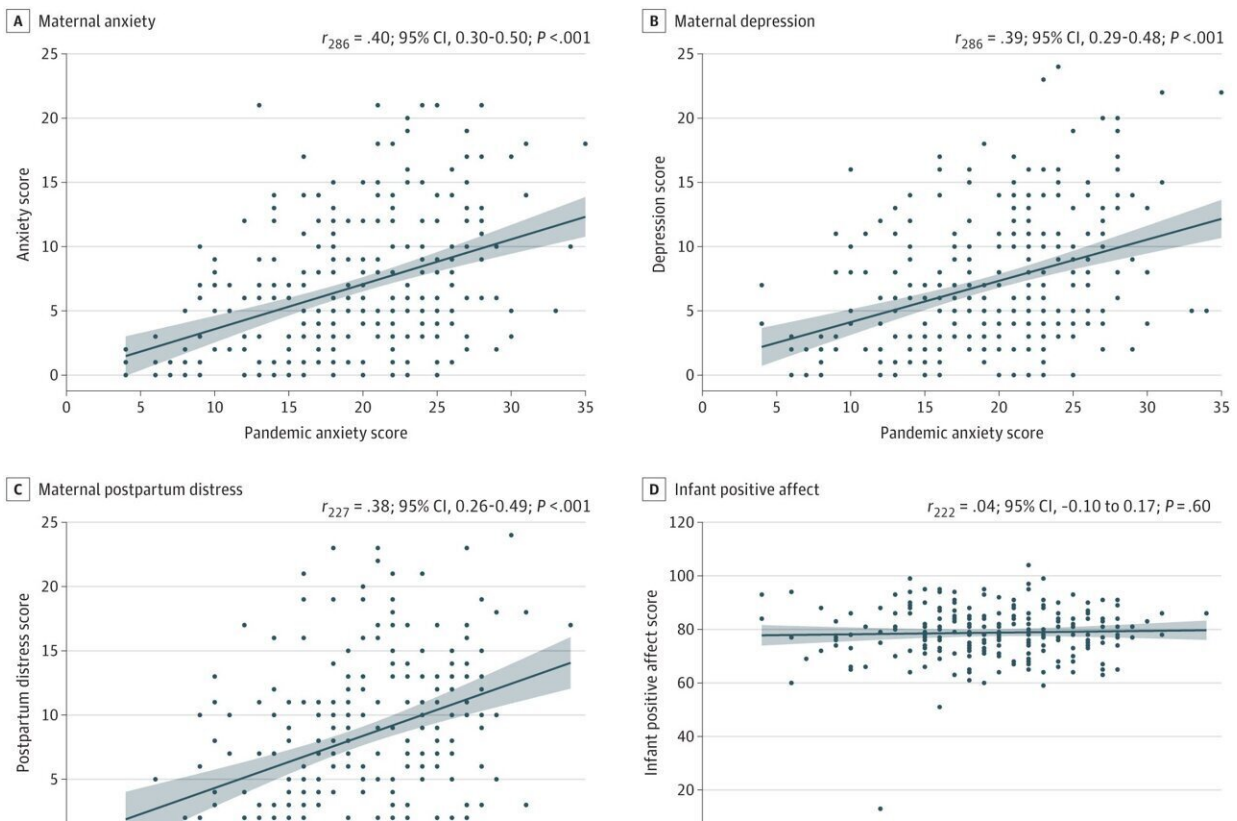


Pandemic stress had a greater impact on those who were pregnant, study finds

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Association Between Antenatal COVID-19–Related Stress With Maternal Mental Health Outcomes and Infant Temperament Outcomes. Credit: *JAMA Network Open* (2023). DOI: 10.1001/jamanetworkopen.2023.2969

COVID-19 related stress had a greater impact on the mental health of those who were pregnant during the pandemic, compared to those who

weren't, new UNSW Sydney research has found.

In a [longitudinal study](#) of 742 pregnant participants, Dr. Susanne Schweizer from UNSW Science, together with colleagues in Europe and the US, collected data on mental [health](#) at multiple time points, both during and after [pregnancy](#).

[Their earlier analysis](#) found COVID-19 related [stress](#) had the greatest impact on pregnant people who had a tendency to worry, felt lonely, or had a low tolerance for uncertainty.

A follow-up study, published today in *JAMA Network Open*, looked at COVID-19 related stress in the [postpartum period](#), 1.5 years after the first investigation. The team found that feeling stressed about the pandemic during pregnancy not only had a lasting effect on participants' own mental health, but was also associated with an increase in negative mood in their infants.

"The Center for Disease Control identifies pregnant women as a vulnerable group in terms of physical health during pandemics and disease outbreaks," says Dr. Schweizer. "Based on these findings, and those of others, we should also identify pregnant women as a vulnerable group in terms of mental health."

Mental health vulnerability factors

Importantly, the research team compared the pregnant women who took part in the study to gender, age and country matched controls. "So, you have someone who's as similar as possible, but who isn't pregnant at that point in time. And we looked at the impacts of pandemic related stress on their mental health," says Dr. Schweizer.

Pandemic stress was measured using the Pandemic Anxiety Scale, which

measures individuals' concerns about the pandemic, including worries about contracting the virus, having enough food and job-related impacts.

Unsurprisingly, COVID-19 related stress was associated with more [mental health problems](#) in both women who were pregnant and those who weren't. "But not all women were affected in the same way. There were vulnerability factors, such as lack of social support, increased loneliness, worry and intolerance of uncertainty, which had a greater impact on mental health in the context of pandemic related stress in [pregnant women](#), compared to their non pregnant counterparts," says Dr. Schweizer.

Effect on infant behavior

At the final timepoint, on average 18 months after the initial assessment, the team administered the same set of measures to the cohort.

"But this time, we also administered a measure on postpartum distress, which captures mental health symptoms that are related to the postpartum period, such as thoughts of harm befalling the child or inflicting harm on a child, and we also measured infant mood and behavior."

The follow-up study found that COVID-19 related stress during pregnancy, captured in the first paper, was significantly associated with poor postpartum maternal mental health outcomes.

"What's always going to predict your mental health best is your mental health at a previous timepoint," says Dr. Schweizer. "So I was surprised that pandemic related stress during pregnancy adversely impacted maternal depression, anxiety and distress that far into the future, even when we controlled for their previous levels of mental well-being."

But it wasn't just the mothers who were negatively impacted. For those who were stressed by the pandemic, there was a higher chance of what researchers call 'negative affectivity' in their infants.

Negative affectivity includes the infant being more likely to cry and less easily settled, as well as less likely to venture into an unknown situation.

"Negative affectivity is a measure of infant mood. But it's been associated with a range of behavioral problems, and importantly, also cognition. It has also been associated with developmental outcomes across the lifespan."

While there is already a robust literature showing that maternal postpartum mental health is significantly associated with infant behavior, this is one of the first studies to examine the association of stress during pregnancy with mother and infant mental health outcomes during the pandemic.

Bringing mental health to the forefront

Dr. Schweizer herself has lived experience of being pregnant during the pandemic.

"I was very lucky in that I knew I was in a position that I could continue working, so I didn't have those economic pressures, but I was a high-risk pregnancy. And then my child was born premature," says Dr. Schweizer.

"That's a distressing experience anyway, even under normal circumstances, but it was very much compounded by the fact that I was separated from my other children, I was never able to see my daughter with my husband together until much later.

"And so for me, it was a very direct and personal experience of how this the [pandemic](#) impacted the peripartum period."

She argues more support is urgently needed for pregnant people's mental health as part of standard pregnancy care. "Pregnancy is a period of vulnerability for mental health problems. Intense and rapidly fluctuating moods and emotions are a normal part of pregnancy and after birth many people will experience intrusive, unwanted thoughts. But we are not told enough about this.

"Pregnant individuals need to be given information about what to expect, what is common and when they should seek help."

Off the back of this study, Dr. Schweizer and her team are looking to create online educational resources for people to learn about how pregnancy can impact [mental health](#), and they are hoping to bring this conversation to the forefront of the discourse around pregnancy care.

More information: Association of Antenatal COVID-19-Related Stress With Postpartum Maternal Mental Health and Negative Affectivity in Infants, *JAMA Network Open* (2023). [DOI: 10.1001/jamanetworkopen.2023.2969](#)

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