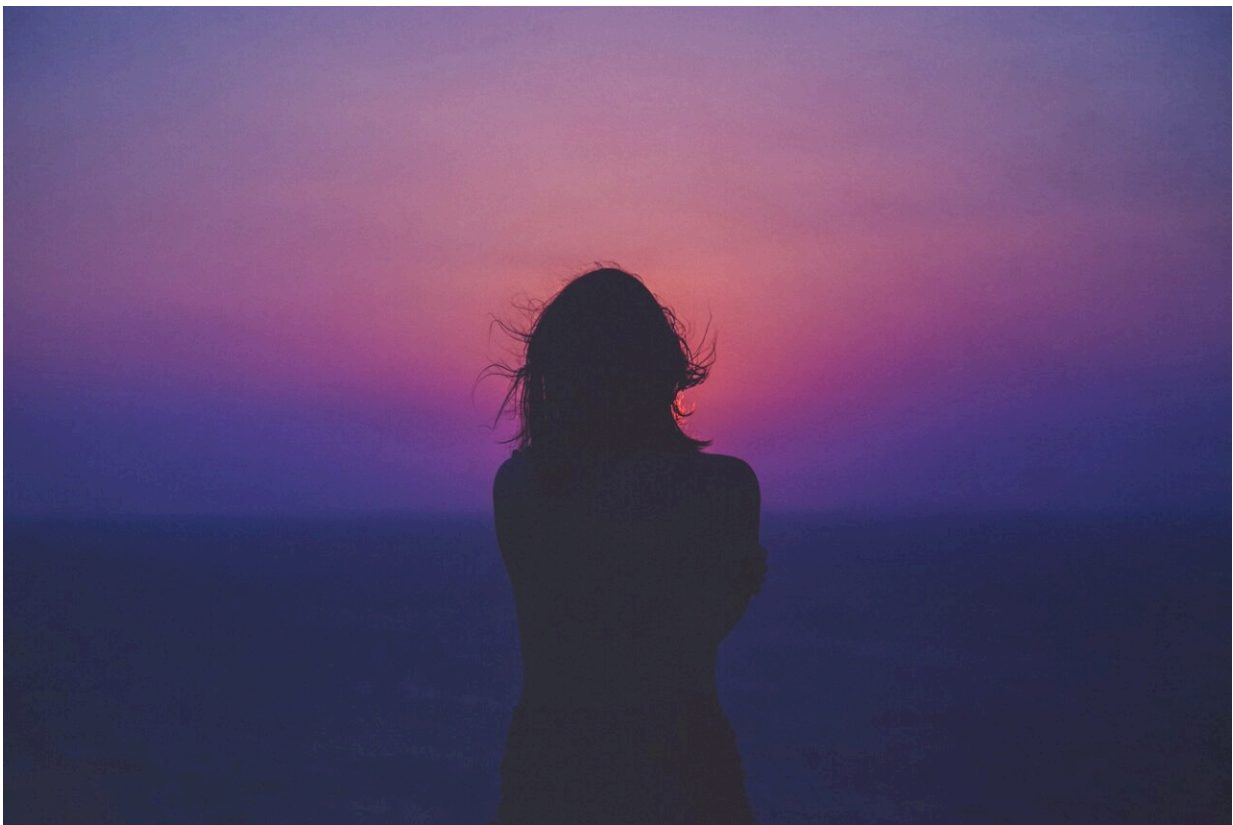


International study reveals critical insights into timely interventions for maternal depression

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A large-scale international study spanning three continents, led by researchers from A*STAR's Translational Neuroscience Program of the

Singapore Institute for Clinical Sciences (SICS) in Singapore, has found that maternal depressive symptoms begin from early pregnancy and can last up to two years after childbirth.

While [health professionals](#) often emphasize the postpartum stage after childbirth as a high-risk [period](#) for the onset of depression, findings from this latest study reveal a different reality—that maternal [depressive symptoms](#) can appear from early pregnancy and therefore timely interventions during pregnancy are needed to better mitigate such symptoms for improved outcomes for both mother and child.

Previous findings from the Growing Up in Singapore Towards healthy Outcomes (GUSTO) project showed clearly that prenatal maternal mental health plays a significant role in the [brain development](#) and health of one's offspring. Research shows that maternal depressive symptoms can negatively affect a child's nutrition, physical health, cognitive functions, socioemotional development, academic achievement, and also increase the risk of ADHD and depression.

The study was published in the journal [JAMA Network Open](#) on 26 Oct 2023, titled "Perinatal Trajectories of Maternal Depressive Symptoms in Prospective, Community-Based Cohorts Across 3 Continents." It involved seven prospective observational cohorts across the United Kingdom, Canada, and Singapore. A*STAR researchers analyzed the maternal depressive symptom trajectories of 11,563 [pregnant women](#), spanning multiple decades in the largest such analysis to date.

Among the cohorts analyzed were three from Singapore: Growing Up in Singapore Towards healthy Outcomes (GUSTO), Singapore PREconception Study of Long-Term Maternal and Child Outcomes (S-PRESTO) and Mapping Antenatal Maternal Stress (MAMS).

Each cohort included depressive symptoms measured at multiple

perinatal time points and analyzed independently. The data was based on prospective maternal self-reports of depressive symptoms, eliminating the potential bias collected from retrospective reports.

The study showed three distinct clusters of mothers with stable low, mild, and high symptom levels over the perinatal period—the period from the beginning of pregnancy up to two years post-birth. The trajectories of depressive symptoms were present for all mothers. This was true even those who met clinical cut-offs for probable depression indicating that more serious instances of depression in women begin prior to the birth of the child.

With a more precise grasp of when depressive symptoms begin for mothers, the study underscores the importance of early interventions during pregnancy to mitigate maternal depressive symptoms and their impact on offspring. This [paradigm shift](#) has far-reaching implications for health care professionals, policymakers, and the general public.

"Several recent studies, including one conducted locally suggest that maternal depressive symptoms may begin before conception, which is why interventions, guidelines for care, and public health policies aimed at alleviating maternal depressive symptoms should target as early as preconception, at least during pregnancy, in addition to the postnatal period, for more effective outcomes," says Dr. Michelle Kee, Research Scientist at A*STAR's SICS and first author of the paper.

Professor Michael Meaney, the Director of the Translational Neuroscience Program at SICS, adds, "The medical media continues to refer to maternal depression as "postnatal depression," implying that the onset of symptoms occurs following the birth of the child. This extensive analysis shows that the onset of symptoms is in the prenatal period and remains largely stable thereafter."

"This is true for women in the community as well as for those experiencing more severe symptom levels. The results of this study point to the early antenatal period as a crucial time point for the identification of stable trajectories of maternal depressive symptoms and emphasizes the critical importance of prenatal intervention."

Associate Professor Helen Chen, Senior Consultant Department of Psychological Medicine, KK Women's and Children's Hospital and Clinical Associate Professor of Duke-NUS Medical School said, "This study provides strong evidence across populations that it is crucial to address depression during pregnancy so that mothers are well and ready to receive their babies, rather than to wait until the postnatal period, for postnatal depression has traditionally been the focus."

"Given what we know about the impact of perinatal [depression](#) on child development and health outcomes, the paper will help to inform health care systems to direct resources upstream to the antenatal period. This will benefit our mothers and their children, and population health of future generations."

More information: Michelle Z. L. Kee et al, Perinatal Trajectories of Maternal Depressive Symptoms in Prospective, Community-Based Cohorts Across 3 Continents, *JAMA Network Open* (2023). [DOI: 10.1001/jamanetworkopen.2023.39942](https://doi.org/10.1001/jamanetworkopen.2023.39942)

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