Pregnant women from ethnic minority or deprived socio-economic backgrounds more likely to face depression

July 11 2022

Credit: Pixabay/CC0 Public Domain

As the incidence of obesity increases worldwide, there are concerns about maternal obesity as studies have found associations between

maternal obesity and depression in mothers during pregnancy, which are associated with higher risks of psychological and neurodevelopmental disorders in the mother's offspring.

Though these factors can have an impact on the fetus, previous research hasn't analyzed these factors within the same sample, making it difficult to establish a correlation between each of these factors and depression/maternal obesity.

The study used data from UPBEAT (led by Professor Lucilla Poston) which collected samples from more than 1300 people who were obese during pregnancy. Using a data-driven approach, each person was categorized on one of four trajectories of depressive symptoms in pregnancy, ranging from "no depression" to "likely chronically depressed."

Results classified the majority of women as either "no depression" or "very mild symptoms." However, the authors noticed that among women with depressive symptoms there were distinct socio-economic profiles. Specifically, more severe depressive symptoms were associated with a lower socio-economic status, and people of ethnic minority backgrounds.

Additional analysis found that women who were ranked on a more depressive trajectory ate less nutritional diets and were more likely to be exposed to infections. Blood samples corroborated this, showing signs of inflammation, and lower concentrations of a biomarker for placental growth. Alongside these data, the authors discovered that women classified with more depressive trajectories were more likely to miss appointments for detecting gestational diabetes, as well as three times more likely to experience a preterm birth.

These factors, linked to maternal depression and obesity, are potentially related to adverse outcomes in the brain development of children during

pregnancy. The results invite further research into the causal relationships with each factor and their potential molecular mechanisms.

"Long-term strategies to improving population health outcomes will need to consider the direct and indirect impact of maternal mental health and not only support the women themselves but also address the underlying socio-economic disparities in this context," says Dr. Julie Sigurdardottir, Postdoctoral Researcher and first author of the study.

The results also highlight the disparities in maternal mental health. Not only should efforts tackling maternal mental health focus on people from disadvantaged socio-economic backgrounds, but it reminds us that we need to address the underlying socio-economic disparities.

The research was published in *eClinicalMedicine*.

More information: Julie Nihouarn Sigurdardottir et al, Longitudinal phenotyping of maternal antenatal depression in obese pregnant women supports multiple-hit hypothesis for fetal brain development, a secondary analysis of the UPBEAT study, *eClinicalMedicine* (2022). DOI: 10.1016/j.eclinm.2022.101512

Provided by King's College London