

From Worry to Weight

Understanding the Impact of Prenatal Maternal Mental Health in Qatar: Why Family and Community Support Matter



Prof. Giridhara Rathnaiah Babu,
Professor of Population Medicine,
Department of Population Medicine,
College of Medicine - Qatar University



Dr. Eleni Fthenou, Scientific Office
Manager, Qatar Precision Health
Institute, Qatar Foundation



Angham Ibrahim Tartour, PHD Candidate,
Department of Population Medicine,
College of Medicine - Qatar University

For many women, pregnancy can be a period of stress, worry, and emotional challenges. A certain level of stress during pregnancy is the body's natural way of supporting fetal growth and preparing the mother for childbirth. However, prolonged or high stress levels may have negative effects on both the mother and the baby. Prenatal psychological distress is a broad term that includes symptoms of depression, anxiety, and stress during pregnancy. Although it is not classified as a psychiatric disorder, it reflects the everyday emotional struggles many women face during pregnancy that often go unnoticed and undiagnosed. These symptoms can interfere with healthy gestational weight gain, which refers to the amount of weight a mother gains during pregnancy. Both mental health and weight gain influence pregnancy outcomes, such as the risk of gestational diabetes, preterm birth, postpartum complications, and even long-term health risks for children.



Why does this matter?

According to the World Health Organization, about one in five women experiences psychological distress symptoms during pregnancy. Additionally, around 45% of pregnant women gain weight outside the recommended range, either too little or too much, which can further increase health risks for both the mother and the baby.

The challenge is further pronounced in Qatar: around 58% of women begin pregnancy already overweight or obese, with a body mass index (BMI) above 25 kg/m². During pregnancy, one in three women gains less than the recommended amount of weight, while almost half exceed the healthy range for gestational weight gain. While most previous research has focused on the health impact of excessive weight gain during pregnancy, a team of researchers at the College of Medicine (CMED), Qatar University (QU), led by Professor Giridhara R. Babu and PhD candidate Angham Ibrahim, takes a different approach. Instead of focusing solely on outcomes, they step back to explore a more fundamental question: What drives these weight-gain patterns in the first place?

What was studied?



QBIC QATARI BIRTH COHORT

To answer this question, Professor Giridhara R. Babu and Angham Ibrahim used data from the Qatari Birth Cohort (QBIC), an established cohort led by Dr. Eleni Fthenou at the Qatar Precision Health Institute (QPHI). Dr. Fthenou also serves as a co-investigator on the current study. Their analysis examined the impact of depression and anxiety during pregnancy on women's gestational weight gain, as well as the role of social support networks in shaping this relationship. Depression and anxiety symptoms during pregnancy were assessed using the Edinburgh

Prenatal Depression Scale (EPDS) or obtained from the participants' medical records. Women who had either depression, anxiety, or both were considered to have prenatal psychological distress. Three weight gain outcomes were considered: 1) early pregnancy weight change, 2) mid-to-late pregnancy weight change, and 3) total gestational weight gain. The total gestational weight was classified according to the 2009 Institute of Medicine (IOM) guidelines. Categories were defined based on the pre-pregnancy BMI of each woman:

- Inadequate: less than the recommended range.
- Adequate: within the recommended range.
- Excessive: greater than the recommended range.

Finally, the CMED researchers evaluated the impact of daily social support and empowerment indicators, including whether a woman maintained close contact with her family, received practical assistance from neighbors, and whether she was employed during pregnancy.

What was found?

- Mental well-being during pregnancy can have a measurable impact on physical health
- **High prevalence of prenatal psychological distress:** Nearly 41% of pregnant women in the QBIC study experienced depression or anxiety symptoms.
- **Different effects of depression and anxiety:** Women with antenatal depression gained more weight on average during pregnancy, while those with anxiety gained less.
- **Abnormal weight gain patterns:** Both conditions were associated with deviations from healthy pregnancy weight gain. Women with depression had a 31% higher risk of excessive gestational weight gain, while those with anxiety had a 54% higher risk of inadequate weight gain according to IOM guidelines.
- The Power of Family Cohesion and Community Support

A key finding of this study was that strong family and social networks appeared to buffer the negative effects of psychological distress on healthy pregnancy weight gain. For example, women with antenatal depression





who reported difficulty receiving practical support from neighbors were nearly five times more likely to gain excessive weight during pregnancy. In contrast, those who reported easy access to neighborly help had a 15% lower risk of excessive weight gain.

In other words, when women remained closely connected with family and friends, had a supportive community, or gained empowerment through employment, the stress they experienced during pregnancy had a less significant impact on their health.

What are the implications of these findings?

The study findings show that maternal mental health does not just affect emotional well-being; it also has tangible biological effects on pregnancy. A pregnant woman who feels distressed, unsupported, or anxious may eat differently, sleep poorly, or experience hormonal changes that affect her weight gain.

Given that over half the women in Qatar are overweight or obese before pregnancy, understanding such mental health links could help health professionals design better support systems and prevention strategies for expectant mothers.

What can be done?

This scholarly work reinforces a simple yet powerful message: mental health care must be an integral part of prenatal care. Some practical steps include:

- Routine screening for depression and anxiety at early stages and throughout pregnancy.
- Counseling services for women who are struggling, especially those without strong family support.
- Educational programs for families, so partners and relatives can better support expectant mothers.
- Community networks such as mother support groups, which allow women to share experiences and reduce feelings of isolation.
- Policies and protections that make it easier for women to take time off work, access healthcare, and raise concerns without stigma.

Looking ahead

This study is a step towards understanding how psychological distress impacts pregnancy in Qatar. Future research should include larger groups of women, explore long-term outcomes for children, and examine interventions that could help reduce distress.

Take-home message

Healthy pregnancies are the cornerstone for family wellbeing: when women feel supported, families become stronger, and babies enjoy a better start in life. Moreover, empowered women, those who feel safe, respected, and supported, are more likely to seek healthcare, share their struggles, and access resources that safeguard their physical and mental health.