Does climate change trigger prolonged pregnancy?

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WHILE the impact of the climate on premature births has already been established in previous research, its influence on postterm pregnancies remains poorly understood.



Now, for the first time, researchers at an Australian university have looked into the matter.

Their study suggests that exposure to air pollution and extreme temperatures during pregnancy may increase the risk of prolonged pregnancy.

To reach this conclusion, the team led by Dr Sylvester Dodzi Nyadanu of Curtin University analysed data from almost 400,000 births in Western Australia.

The study, available via the Sciencedirect platform, reveals that exposure to high levels of fine particulate matter (PM2.5) and biothermal stress increases the likelihood of a pregnancy exceeding 41 weeks.

The researchers describe biothermal stress as a measure that combines air temperature, radiant temperature, relative humidity, wind speed and human physiology.

“Environmental stressors, including climate-related exposures during pregnancy, have been associated with maternal stress response and subsequent disruptions in endocrine and inflammatory activities, which increase towards the end of pregnancy. This can either shorten gestation, leading to preterm birth, or lengthen gestation, resulting in prolonged pregnancy in some cases,” explains Dr Nyadanu in a news release.

The study reports that exposure to pollution and biothermal stress during pregnancy increases the risk of prolonged pregnancies, particularly in women over 35, first-time mothers, those living in urban areas and those with complicated pregnancies.

A public health issue

Like premature births, prolonged pregnancies can have a significant impact on the health of both mother and child.

In particular, they can lead to an increased need for more medicalised interventions, such as caesarean sections or labour inductions. They are also associated with an increased risk of stillbirth, birth complications, infant mortality and behavioural or emotional disorders in young children.

With climate change driving more extreme weather events and deteriorating air quality, it is becoming crucial to consider these exposures when assessing pregnancy-related risks.

Dr Nyadanu stresses the need for health professionals, policymakers and pregnant women – especially the most vulnerable – to take these climate-related exposures into account. “This study highlights the need for targeted policies and preventative measures to reduce climate-related health risks, including better air quality regulations and public health initiatives aimed at protecting expectant mothers and children from extreme climatic conditions,” the researcher concludes.