Diet, malaria and substance use linked to Pacific preterm births

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A new Curtin University study has found diet, malaria, substance use and a lack of antenatal care services are linked to one in 10 babies in the Pacific Island region being born preterm and of low birth weight.

Published in leading journal *The Lancet Regional Health-Western Pacific*, the study reviewed primary studies and reports conducted from the sovereign island states and territories of the region including Fiji, Papua New Guinea, Samoa and Vanuatu.

Lead researcher Ph.D. student Lydia Sandrah Kuman Kaforau, from the Curtin School of Population Health, said the research was the first of its kind in the Pacific Island region.

"Low birth weight, or babies born weighing less than 2,500gm, and preterm birth, or those born before 37 weeks, are the main causes of infant and child mortality and morbidity in low and middle-income countries," Ms Kaforau said.

"While the prevalence and exposures of adverse birth outcomes is well studied in low and-middle-income countries, it is not well known for the Pacific Island region.

"Our study maps the available evidence on the prevalence of low birth weight, preterm birth, and Small for Gestational Age (SGA), as well as their corresponding risks in the region."

Ms Kaforau said that there were many contributing risk factors to preterm birth and other adverse birth outcomes that could ultimately be avoided.

"We found malaria in pregnancy and substance use, including betel nut and tobacco, are the main drivers for low birth weight in the region," Ms Kaforau said.

"Similarly, we identified malaria in pregnancy is a risk factor for preterm births, as well as obesity and obesity-related conditions, which may induce hypertension and gestational diabetes.

"Further, the lack of antenatal care services was also associated with adverse birth outcomes."

The research was supervised and co-authored by Professor Gavin Pereira, Professor Jonine Jancey and Dr. Gizachew Tessema, also from Curtin's School of Population Health.

Dr. Gizachew Tessema said the findings would inform future health promotion interventions for women during pregnancy.

"Additional research will contribute to improving knowledge gaps and it's vastly needed in other parts of the Pacific region.

"Moreover, future study will also help us to explore the extent of other adverse birth outcomes such as stillbirth and miscarriages."

More information: Lydia S.K. Kaforau et al, Prevalence and risk factors of adverse birth outcomes in the Pacific Island region: A scoping review, *The Lancet Regional Health - Western Pacific* (2022). DOI: 10.1016/j.lanwpc.2022.100402

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