Stress as a Risk Factor for Maternal and Infant Mortality Disparities in the United States: A Comparison of Black and White Women

In 2018, the national average infant mortality rate for non-Hispanic Black Americans was 10.8 deaths per 1,000 live births, nearly double the U.S. average of 5.7 deaths per 1,000 live births. We hypothesize lifelong maternal stress in Black American women manifests as adverse birth and maternal outcomes. Using data from the 2017-2018 National Health and Nutrition Examination Survey (NHANES), we collected information on biological stress factors and health indicators. We aimed to look at our hypothesized connections between stress indicators and poor maternal and infant outcomes. We expected higher levels of stress indicators in non-Hispanic Black women, therefore supporting a linkage between stress and the observed maternal and infant outcomes. White blood cell (WBC) count and creatinine levels in urine served as biological stress indicators. We cross-examined them with health indicators from surveys, supplying a metric for our sample populations' physical health and access to care. Based on our statistical analysis, access to health insurance and a healthy diet are significantly different between non-Hispanic Black and White women's health which may cause stress. We found significant relationships between elevated levels of biological stress indicators and high blood pressure in non-Hispanic Black women. These results indicate the necessity for medical care to consider sociocultural background and how the manifestation of stress physiologically affects pregnancy outcomes. Although other health indicators may render results unclear, it is evident that Black women and children are dying at much higher rates than White women in the United States, and lifelong stress may be to blame.