

THE EFFECT OF PRENATAL STRESS ON LOW BIRTH WEIGHT: A META-ANALYSIS

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ABSTRACT

Background: Low birth weight remains a major public health concern of neonatal mortality rate, especially in developing countries. The mother's psychological stress during pregnancy was reported as one of the causes of low birth weight in children. This study aimed to determine the effect of prenatal stress on low birth weight.

Subjects and Method: This was a meta-analysis and systematic review. This study was conducted by collecting articles from PubMed, Google Scholar, Science Direct, Directory of Open Access (DOAJ), Springer Link databases, from 2006-2020. Keywords used "Prenatal Stress" AND "Low Birth Weight". The inclusion criteria were open access and full text articles, using English or Indonesia language, pregnant women with stress, using cohort study design, and reporting adjusted odds ratio (aOR). The articles were selected by PRISMA flow chart. The quantitative data were analyzed using random effect model run on Revman 5.3.

Results: 5 studies from United States, Suriname, Macao, Israel, and South Africa reported that prenatal stress increased the risk of low birth weight (aOR= 1.94; 95% CI= 1.33 to 2.81; $p < 0.001$), with $I^2 = 0\%$; $p = 0.45$.

Conclusion: Prenatal stress increases the risk of low birth weight.

Keywords: prenatal stress, low birth weight

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