

# **The Effect of Pregnancy Induced Hypertension and Multiple Pregnancies on Preterm Birth in Ethiopia: A Systematic Review and Meta-Analysis**

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## **Abstract**

**Introduction:** Preterm birth is one of the major determinants of neonatal morbidity and mortality worldwide. Therefore, this study aimed to estimate the pooled prevalence and the effect of pregnancy induced hypertension (PIH) and multiple pregnancies on preterm birth in Ethiopia.

**Method:** The databases used to identify studies were PubMed, EMBASE, Google scholar, and a web of science. Additionally, reference lists of included studies and Ethiopian institutional research repositories were used. Appropriate search terms were used to retrieve studies. Searching was limited to studies conducted in Ethiopia and published in English language. Cohort, cross-sectional, and case-control studies were included. Joanna Briggs Institute Meta-Analysis of Statistics Assessment and Review Instrument (JBI-MAStARI) was used for critical appraisal of studies. A weighted inverse variance random effects- model was used. The  $I^2$  test statistics and Egger's test were used to test heterogeneity and publication bias respectively). Subgroup analysis by region was conducted. .

**Result:** A total of 9 studies with 27,119 study participants were included in this systematic review and meta-analysis. The pooled prevalence of preterm birth among mothers give birth in Ethiopia was found to be 13.32% (95% CI = 7.99, 18.660). Pregnancy induced hypertension (Odds ratio = 1.74; 95% CI = 1.29, 2.34) and multiple pregnancy (Odds ratio = 1.92; 95% CI = 1.44, 2.57) were significantly associated with preterm birth.

**Conclusion:** Preterm birth in Ethiopia is a significant problem. Though determinants of preterm birth are multifactorial; PIH and multiple pregnancies remained major contributing factor to the risk of preterm birth. Preconception counseling and antenatal care to facilitate timely management of PIH; more specially controlling of hypertension is very important.

**Keywords:** Ethiopia; Multiple pregnancy; Pregnancy induced hypertension; Preterm birth