Perinatal mortality and its determinants in Sub Saharan African countries: systematic review and meta-analysis

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Statement of the problem: Despite decreasing overall perinatal and maternal mortality in high-income countries, perinatal and maternal health inequalities are persisting in Sub Saharan African countries. Therefore, this study aimed to determine the effects size of rates and determinants for perinatal mortality in Sub-Saharan countries. **Method**: Observational studies published in the English language from January 01, 2000, to May 30, 2019 were included. STROBE and JBI tools were used to include relevant articles for this review. The I^2 and Q-statistic values were used to detect the level of heterogeneity using CMA version 2 software. The Kendall's without continuity correction, Begg and Mazumdar rank correlation and Egger's linear regression tests were used to detect the existence of significant publication bias ($P < 0.10$). The effects size were expressed in the form of point estimate and odds ratio with 95% CI ($P < 0.05$) in the random effect analysis using the trim and fill method. **Result:** The observed and adjusted PMR was found to be 58.35 and 42.95 respectively. The odds of perinatal mortality among mothers who had no ANC visits was 2.04 (CI: 1.67, 2.49, $P < 0.0001$) as compared to those who had at least one ANC visit. The odds of perinatal mortality among preterm babies was 4.42 (CI: 2.83, 6.88, $P < 0.0001$). **Conclusion:** In most cases, heterogeneity was not evident when subgroup analyses were assessed by region, study design, and setting. Only perinatal mortality ($P < 0.0001$), antenatal care ($P < 0.046$) and preterm births ($P < 0.034$) showed a relationship between the standardized effect sizes and standard errors of these effects. **Recommendation:** It informs policy makers and program implementers for minimizing the existing socioeconomic inequalities between regions and nations.