

# Stillbirth and its association with early rupture of membranes in Sub-Saharan Africa: Systematic review and meta-analysis

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## Abstract

**Background:** The stillbirth rate is an important indicator of access to quality antenatal and delivery care services. Many previous pocket studies were conducted to assess the magnitude of stillbirth. **Method:** Electronic databases were used for searching original articles. The heterogeneity of the studies was checked. The random-effects method was applied to estimate the pooled prevalence of stillbirth and the effect size of the early rupture of membranes in sub-Saharan Africa. Subgroup analysis was performed. A funnel plot and Egger's regression test were used to see publication bias. **Result:** Pooled prevalence of stillbirth in sub-Saharan Africa was 6.4 % (95% CI: 5.5 - 7.3). In sub-group analysis, Southern African regions had a higher stillbirth prevalence and the western African regions had a lower than East and Southern Africa. The prevalence of stillbirth in the region is increased from 4.1% (95% CI: 2.2 – 6.0) before 2015 to 7.1% (95% CI: 5.8 - 8.3) after 2015. The pooled odds ratio results from seven studies showed the non-significant effect of early rupture of membrane on stillbirth (pooled OR = 1.54, 95% CI: 0.26 - 2.82). According to the regression test (Egger test), there were no small study effects or publication bias (P = 0.108). **Conclusions:** Pooled prevalence of stillbirth in sub-Saharan Africa was relatively high. The analysis establishes the minimal effects of early rupture of membrane on stillbirth. Therefore, we recommend that strengthening the testing intervention is crucial to reduce the still relatively high stillbirth. **Keywords:** Stillbirth, Early Rupture of Membranes, sub-Saharan Africa

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