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Maternal birth preparedness and complication readiness remains low in low- and middle-income countries: a systematic review and meta-analysis of observational studies

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Background: The global maternal mortality rate due to preventable pregnancy related complications is 810 per 100, 000 live births. Poor maternal involvement in birth preparedness and complications readiness (BPCR) practice contributes to poor maternal and child health outcomes in low- and middle-income countries (LMICs). This systematic review and meta-analysis determined the pooled prevalence
of maternal BPCR in LMICs.

Methods: Literature published in English language from 2004 through 2022 was retrieved from CINAHL, EMBASE, Google Scholar, Scopus, PubMed, and Web of Science databases. Egger's test and I 2 statistics were used to assess the publication bias and heterogeneity. The publication bias and heterogeneity was validated using the Duval and Tweedie's nonparametric trim and fill analysis using the random-effect analysis. The summary prevalence and the corresponding 95% confidence interval (CI) of BPCR was estimated using random effect model. The review protocol has been registered in PROSPERO with registration code CRD42020213129. The steps to recruit eligible studies and reports of each section of the manuscript were described in PRISMA flow chart and PRISMA 2020 checklist. The Joanna Briggs Institute's quality assessment tool for prevalence studies was used. STATA Version 16.0 was used to conduct the pooled meta-analysis.

Results: Sixty one studies with a total of 44, 554 pregnant women and postpartum nursing mothers' were included. The pooled prevalence of maternal BPCR was 41%. Maternal arrangement of blood donor and knowledge of danger signs of pregnancy and postpartum complications were 15% and 42% respectively. Only 42% of pregnant women and mothers within 42 days of delivery of the baby arranged transport service to the health facility.

Conclusions: Maternal BPCR remains low in LMICs. Maternal knowledge of dangers signs of pregnancy and postpartum complications, arrangement of transport service, and potential blood donor was low in LMICs. Health systems in LMICs must revise their health promotion policies and design evidence-based BPCR implementation strategy to enable active maternal involvement and improved community engagement in BPCR. Point of care access to blood and transport service during pregnancy and postpartum period must be improved to achieve better maternal and child health outcomes in LMICs.

Biography

Minyahil Tadesse Boltena has completed his PhD in Evidence-Based Health Care and works as Knowledge Translation expert to the Ministry of Health of Ethiopia,Armauer Hansen Research Institute,Ministry of Health, Ethiopia.Evidence Based Health Care Centre: A JBI Center of Excellence, Public Health Faculty, Institute of Health, Jimma University, Ethiopia.

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