**Effectiveness of in-service reproductive, maternal, and newborn health blended learning versus face-to-face learning for capacity strengthening of healthcare practitioners in low-and middle-income countries: a systematic review and meta-analysis.**

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**Background**

Globally, around 287,000 maternal deaths occurred in 2020 (WHO) because of mostly preventable pregnancy and childbirth-related causes. Approximately 95% of maternal deaths occur in low and middle-income countries (LMICs). Sub-Saharan Africa alone accounted for around 70% of maternal deaths (2020). All women need access to high-quality care in pregnancy, and during and after childbirth. Most maternal deaths can be avoided with timely and appropriate interventions. Strengthening healthcare professionals' capacity is one of these interventions and has been shown to improve the quality of maternal and newborn health services. Both blended learning and face-to-face learning approaches have been used to build the capacity of healthcare providers in low-resource settings. This systematic review aims to assess, evaluate, and compare the effectiveness of reproductive, maternal, and newborn health (RMNH) face-to-face and blended training approaches on capacity strengthening of healthcare providers in LMICs.

**Methods**

Seven databases and websites were searched for papers describing blended and face-to-face training in reproductive, maternal and newborn health. **Inclusion and exclusion of studies:** Based on PICOT, two reviewers conducted the title and abstract screening, followed by full-text screening, and then a third reviewer will resolve any conflicts. PRISMA was utilized, and 4,920 articles were imported, 1,433 duplicates were removed, 3487 were screened for title and abstract, and 3329 were excluded before full-text screening. The Covidence platform was used for the full-text screening of 158 articles and 64 articles will be screened for data extraction.

**Analysis**

The effectiveness will be assessed on three levels: (1) participant reaction, (2) knowledge and skills acquisition, and (3) return on investment-cost evaluation of blended and face-to-face training.

**Next step**

A template for data extraction was created and put into the Covidence platform. Data extraction is ongoing, and analysis will take place after the extraction is completed. After data extraction and analysis are completed, preliminary results will be shared and will inform PhD protocol development.

***Keywords****: Reproductive, maternal, and newborn health, training, effectiveness, systematic review, blended learning, face-to-face, learning and low-and-middle-income countries.*