

Effectiveness of the SLEEP-BIM (IMB-Based) Health Education Intervention on Safe Infant Sleep Practices: A Cluster-Randomized Controlled Trial in Hulu Langat District, Malaysia

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Abstract

Sudden infant death syndrome (SIDS) remains a leading cause of post-neonatal mortality worldwide, with unsafe infant sleep practices recognised as major modifiable risk factors. In Malaysia, despite extensive maternal and child health (MCH) services, no structured programme specifically targets safe infant sleep, and adherence to international guidelines remains low. The Safe Infant Sleep Practices Behaviour Intervention for Mothers (SLEEP-BIM) is an Information–Motivation–Behavioural Skills (IMB)-based health education programme designed to address these determinants. This parallel cluster-randomized controlled trial evaluates the effectiveness of SLEEP-BIM in improving safe infant sleep practices among mothers attending MCH clinics in Hulu Langat District. Eight clinics (four intervention, four waitlist control) will recruit 308 pregnant mothers during antenatal visits (28–36 weeks gestation). Baseline assessment (T0) will occur at two weeks postpartum, with the intervention delivered during the same visit to the intervention group. SLEEP-BIM consists of a two-hour, face-to-face workshop on safe infant sleep practices grounded in the IMB model. Outcomes including safe infant sleep practice (primary) and maternal knowledge, attitudes, beliefs, and self-efficacy (secondary) will be assessed at T0, T1 (one-month post-intervention), and T2 (three months post-intervention). Generalised estimating equations (GEE) will be used to analyse between-group differences and changes over time. Findings from this trial will provide empirical evidence on the feasibility and effectiveness of a culturally adapted, theory-based intervention. If effective, SLEEP-BIM could be scaled and integrated into national MCH services, contributing to SIDS prevention and strengthening maternal health education in Malaysia.

Keywords

SLEEP-BIM, safe infant sleep, SIDS prevention, health education intervention, Malaysia.

