## Effectiveness of Psychosocial Interventions in Preventing Postpartum Depression among Teenage Mothers: Systematic Review and Meta-Analysis of Randomized Controlled Trials

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Abstract: Background: Postpartum depression is the most common mental health disorder that occurs after childbirth, and it is more prevalent among teenage mothers compared to adults. Although there is emerging evidence suggesting psychosocial interventions can decrease postpartum depression, there are no consistent findings regarding the effectiveness of these interventions, especially for teenage mothers. The current review aimed to investigate the effectiveness of psychosocial interventions in preventing postpartum depression among teenage mothers. Methods: The Preferred Reporting Items for Systematic Review and Meta-analysis (PRISMA) manual was implemented to select articles from online databases. The articles were searched using the Population, Intervention, Control, and Outcome (PICO) model. The quality of the articles was assessed using the Cochrane Collaboration Risk of Bias assessment tool. The statistical analyses were performed using Stata 17, and the effect size was estimated using the standard mean difference score of depression between the intervention and control groups. Heterogeneity between the studies was assessed through the I2 statistic and Q statistic, while the publication bias was evaluated using the asymmetry of the funnel plot and Egger's test. Results: In this systematic review, a total of nine articles were included. While psychosocial interventions demonstrated in reducing the risk of postpartum depression compared to usual maternal care, it is important to note that the mean difference score of depression was significant in only three of the included studies. The overall meta-analysis finding revealed that psychosocial interventions were effective in preventing postpartum depression, with a pooled effect size of -0.5 (95% CI: -0.95, -0.06) during the final time postpartum depression assessment. The heterogeneity level was found to be substantial, with an I2 value of 82.3%. However, no publication bias was observed. Conclusion: The review findings suggest that psychosocial interventions initiated during the late antenatal and early postnatal periods effectively prevent postpartum depression. The interventions were found to be more beneficial during the first three months of the postpartum period. However, this review also highlighted that there is a scarcity of interventional studies conducted in low-income countries, indicating the need for further studies in diverse communities.

**Keywords:** teenage pregnancy, postpartum depression, review

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