

Postpartum Depression Interventions For Mothers In Indonesia: A Literature Review

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Abstract. Postpartum depression is a significant mental health problem among mothers in Indonesia. This review examines non-pharmacological interventions to address postpartum depression among mothers in Indonesia between 2015 and 2025. The data comprise 25 experimental studies involving postpartum mothers across multiple regions in Indonesia. Interventions included physical, psychological, psychoeducational, psychospiritual, midwifery care, and multidimensional approaches. The results show that most interventions significantly reduced postpartum depression scores measured by the Edinburgh Postnatal Depression Scale. Digital and religious-spiritual psychoeducation interventions (dzikir and Quranic recitations) were also effective. Identified limitations include short intervention duration and frequency, quality of guidance, participants' socioeconomic factors, and limited control of external variables. Overall, non-pharmacological interventions effectively support mental health in postpartum mothers in Indonesia and are recommended for integration into primary healthcare services. This review provides empirical evidence to inform culturally and contextually appropriate prevention and management strategies for postpartum depression.

Keywords: Postpartum depression, intervention, literature review, EPDS.

1 Introduction

Postpartum depression is a mood disorder more severe than baby blues and frequently occurs in women with a family history of clinical depression [1]. It is the most common psychological condition experienced by women after childbirth, adversely affecting the health of partners, infants, and children [2]. Mothers with postpartum depression have significant long-term consequences on infant development [3], including anthropometric measures, physical health, sleep, motor skills, language [4], cognitive, social, emotional [4][5][6], behavioral domains [4][7], and the academic achievement of their children [8]. The severity and chronicity of maternal depression increase the likelihood of future adverse effects on the child [6].

Risk factors for postpartum depression are generally categorized into five groups: physical and biological, obstetric and pediatric, sociodemographic, psychological, and cultural [9][10][11]. Protective factors identified include breastfeeding [12], partner support [9], healthy diet and health awareness, education level, and good economic condition [14]. Studies in Indonesia report prevalence rates of postpartum depression ranging from 25.4% to 64% in various regions

(Denpasar 25.4%, Kendari 40%, Aceh 59.2%, and Makassar 64%) [15][16][17][18][19], indicating a critical need for intervention.

Prevention and intervention programs can be classified into universal (all pregnant women), selective (those with risk factors such as primipara or low socioeconomic status), and indicated prevention (presence of depressive symptoms but undiagnosed) [20]. Numerous non-pharmacological interventions have been effective in Indonesia [21], such as Spiritual Management of Relaxation Therapy (SMARTER), moderate aquatic physical activity, early initiation of breastfeeding applications, counseling, effleurage massage, exercise, and wellness methods [22].

Prevention programs worldwide include Japan's HUG Your Baby program [23], Australia's cost-effective interpersonal psychotherapy [24], and the MODparents – Mothers Overcoming Depression program designed to improve parental communication and social support [25]. Locally in Indonesia, interventions like the Antenatal Resilience and Optimism Workshop (AROW) [26], the “Ratu“ Model postpartum depression prevention program [27], effleurage massage for postpartum mothers in Surakarta and Kebumen [28][29], SMARTER for physical and psychological complaints [30], and psychoeducation in Langsa, Aceh [31] have shown positive results. These interventions typically measure outcomes with the Edinburgh Postnatal Depression Scale (EPDS), though effectiveness can depend on intervention duration, sample size, and availability of external controls.

Therefore, further national evaluation of various interventions is needed, highlighting a strong demand for standardized, evidence-based, culturally relevant postpartum depression prevention and treatment strategies in Indonesia. This manuscript reviews the effectiveness of various non-pharmacological interventions as preventive and therapeutic efforts for postpartum depression among Indonesian mothers.

2 Methods

This study uses an experimental literature review method regarding non-pharmacological interventions for postpartum depression in pregnant and postpartum women in Indonesia. The data collection process was carried out by searching articles published from several databases such as PubMed, PsycINFO, Scopus, ScienceDirect, and Google Scholar in the period 2015–(July) 2025. The keywords used in the article search were: ("postpartum depression" OR "postnatal depression" OR "maternal depression" OR "peripartum depression" OR "postpartum depression" OR "postpartum depression" OR "postpartum depression") AND (intervention OR intervention OR Therapy OR therapy OR program) AND (Indonesia).

The article selection stages included identification (a total of 8,910 articles found from all sources), screening (after removing duplicates, titles and abstracts of 406 articles were reviewed), eligibility (76 full-text articles were read to determine inclusion eligibility), inclusion (a total of 25 final articles were included in the review). The inclusion criteria set in this study were: experimental studies conducted in Indonesia with a minimum sample size of 30 people, focusing on interventions for postpartum depression in postpartum mothers, depression measurement using the standard EPDS (Edinburgh Postnatal Depression Scale) instrument, studies published between 2015 and (July) 2025 with full access. The exclusion criteria were studies outside Indonesia, sample size less than 30, descriptive studies without intervention,

non-experimental studies, and articles not fully accessible. The literature extraction process can be seen in figure 1.

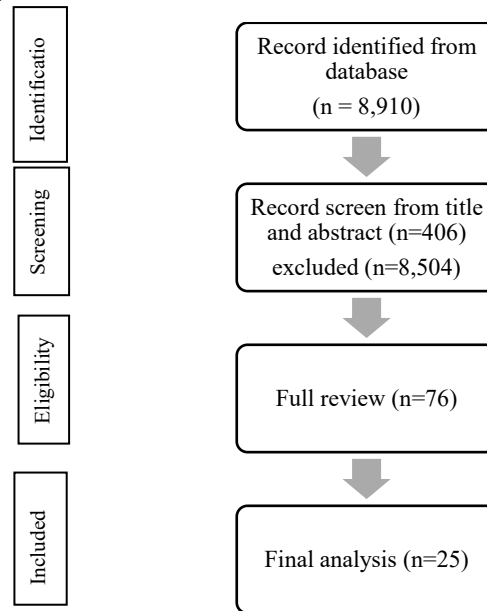


Fig. 1. Literature Extraction Process.

The data extracted from the articles included: author names, year, location, type of intervention, study design, sample size, measurement instrument (EPDS), and main outcomes related to the reduction of postpartum depression symptoms. Data analysis was conducted using a narrative approach based on the effectiveness of each intervention, statistical results, as well as psychological and physiological evaluations (such as cortisol hormone levels in some studies).

3 Results and Discussion

3.1 Results

This review summarizes 25 experimental studies focused on various non-pharmacological interventions for managing postpartum depression among postpartum mothers in Indonesia during 2015 to (July) 2025. Six main categories of interventions were identified: physical interventions, psychological interventions, psychoeducation-education, psychospiritual, midwifery care (Continuity of Care), and multidimensional combinations. The Edinburgh Postnatal Depression Scale (EPDS) was the primary tool used to measure postpartum depression levels, showing significant score reductions in treatment groups compared to controls. Some studies also used complementary instruments such as the CES-D (Center for Epidemiologic Studies Depression Scale), HADS (Hospital Anxiety and Depression Scale) [32], PSS (Perceived Stress Scale), GAD-7 (Generalized Anxiety Disorder-7), MIBS (Mother-Infant Bonding Scale) [33]. Almost all studies (23 out of 25) demonstrated statistically and clinically significant effectiveness in reducing postpartum depression levels, while two studies reported non-significant statistical results despite showing score reductions [35][36].

Quantitatively, physical interventions like effleurage massage, prenatal/postnatal yoga, postnatal exercise, acupressure, and aromatherapy yielded EPDS score reductions ranging from 3 to 6 points. Psychological interventions including Cognitive Behavioral Therapy (CBT), mindfulness-based CBT, psychoeducation, laughter therapy, and CBT-mindfulness based digital counseling resulted in average decreases of 4–8 points. Spiritual interventions such as dzikir and prayer (Double D Method) reduced depression by up to 42%, whereas combined educational and therapeutic interventions, including Continuity of Care and Group Therapy, produced the most consistent outcomes by merging psychological, social, and physical approaches.

Effectiveness was influenced by intervention duration, frequency, quality of guidance, and participants' socioeconomic factors. Common limitations included small sample sizes, short intervention and observation periods, lack of control groups in some studies, and variations in measurement methods. Nonetheless, the available evidence supports that non-pharmacological interventions are effective and safe methods to reduce postpartum depression symptoms in Indonesia. Overall, this review confirms the success of non-pharmacological approaches, especially CBT and physical therapies, as safe and effective strategies for preventing and alleviating postpartum depression among Indonesian mothers, emphasizing the need for culturally adapted and contextually relevant implementation.

Table 1. Articles included in the review.

Author	Intervention	Sample size	Design	Result	Location
Murwati & Istiqomah (2015)	Massage therapy	30	Quasi-experiment (one group pretest-posttest design)	There is a significant effect of the duration and frequency of massage therapy on reducing postpartum depression; <ol style="list-style-type: none"> 1. Before intervention: 50% normal and 50% depression 2. After intervention: 76.7% normal and 23.3% depression 	Klaten, Central Java
Murwati & Suroso (2017)	Postpartum care and CBT (Cognitive Behavior Therapy)	50 (25 intervention group, 25 control group)	Quasi-eksperimen (post-test control group design)	CBT significantly reduces the risk and score of postpartum depression in postpartum mothers; <ol style="list-style-type: none"> 1. Intervention group: 16% mild depression 2. Control group: 52% depression from mild to severe 	Klaten, Central Java
Anggarini et al. (2018)	Postpartum gymnastic	59 (29 intervention group, 30 control group)	Quasi-experiment (non-equivalent pretest–posttest control group design)	Postpartum gymnastic significantly reduces maternal depression symptoms compared to standard care; <ol style="list-style-type: none"> 1. Before intervention: intervention group \bar{x}=9.86, control group \bar{x}=8.50. 2. After intervention: intervention group \bar{x}=6.14, control group \bar{x}=9.77 	Sleman, Yogyakarta

Author	Intervention	Sample size	Design	Result	Location
Fidora et al. (2018)	Health Education	35	Quasi-experiment (pre and post test only)	Health education significantly reduced maternal depression symptoms; 1. Before intervention \bar{x} EPDS=12.83. 2. After intervention \bar{x} EPDS=7.69	Yogyakarta
Bustami et al. (2019)	Continuity of Care (CoC)	60 (30 intervention group, 30 control group)	Quasi Experimental Design dengan dua kelompok (Kelompok eksperimen: Mendapatkan intervensi berupa Continuity of Care (CoC) dan kelompok kontrol: Tidak mendapatkan intervensi CoC.)	Continuity of Care (CoC) does not have a statistically significant effect on postpartum depression, but mothers who receive CoC tend to experience lower depression than those who do not receive it; 1. Intervention group \bar{x} EPDS=6.73 (SD=4.525) 2. Control group \bar{x} EPDS=8.50 (SD=4.305)	Padang, West Sumatera
Kusumastuti et al. (2019)	Effleurage massage therapy	44 (22 intervention group, 22 control group)	Non-Equivalent Control Group Design (Pretest-Posttest Only)	Effleurage massage therapy, both statistically and clinically, is effective in preventing postpartum depression in postpartum mothers.	Kebumen, Central Java
Maimunah & Masita (2019)	Double D (<i>Dzikir dan Doa</i>) Method	84 (42 intervention group, 42 control group)	Quasi-experiment (posttest only control group design)	The Double-D method is effective in reducing postpartum depression in postpartum mothers.	Surabaya, East Java
Fithriany et al. (2022)	Psychoeducation	62	Quasi-experiment (one group pretest-posttest design)	Psychoeducation has been proven effective in reducing cortisol levels and postpartum depression; 1. Before intervention: \bar{x} EPDS=14.87; \bar{x} cortisol level=15.86	Langsa, Aceh

Author	Intervention	Sample size	Design	Result	Location
Haerani & Bohari (2022)	Accupressure therapy	30	Quasi-experiment (one group pretest-posttest design)	<p>2. After intervention: \bar{x}EPDS=12.71; \bar{x}cortisol level=11.68</p> <p>Acupressure therapy significantly reduced EPDS scores. There was a decrease in the mean EPDS score at each visit.</p> <p>1st day \bar{x}EPDS=12.33 8th day \bar{x}EPDS=6.83</p>	Bulukumba, South Sulawesi
Oktaviana et al. (2022)	Health Education and Theurapeutic Group Therapy	96 ibu postpartum (48 intervention group, 48 control group)	Quasi-experiment (pretest-posttest control group design)	The combination of health education and Therapeutic Group Therapy is more effective in reducing the risk of postpartum depression than health education alone.	
Rochana et al. (2022)	Health Education	60 (30 intervention group, 30 control group)	Quasi-experiment (pretest-posttest control group design)	<p>Education using e-booklets has been shown to significantly:</p> <ol style="list-style-type: none"> 1. increase breastfeeding self-efficacy, 2. reduce symptoms of postpartum depression. <p>Before intervention:</p> <ol style="list-style-type: none"> 1. intervention group: self-efficacy 54.70; EPDS 6.10 2. control group: self-efficacy 56.43; EPDS 7.53 <p>After intervention:</p> <ol style="list-style-type: none"> 1. intervention group: self-efficacy 62.10; EPDS 4.60 	Cilacap, Central Java

Author	Intervention	Sample size	Design	Result	Location
Sari et al. (2022)	Continuity of Care (CoC)	60 (30 intervention group, 30 control group)	Quasi-experiment (pretest–posttest control group design)	<p>2. group intervention: self-efficacy 56.67; EPDS 8.53</p> <p>CoC did not have a statistically significant effect on the likelihood of postpartum depression, but the group that did not receive CoC tended to have higher depression scores:</p> <ol style="list-style-type: none"> 1. Intervention group \bar{x}EPDS=6.71 2. Control group \bar{x}EPDS=8.53 	Palembang, South Sumatera
Sumaningsih et al. (2022)	Music Therapy and murrotal Quran	60 (30 intervention group, 30 control group)	Quasi-experiment (pretest–posttest control group design)	<p>There is a very significant effect of music therapy and murottal Quran on reducing the incidence of postpartum depression after three days of therapy.</p> <p>The intervention group experienced a significant decrease in EPDS scores; the control group experienced an increase in EPDS scores.</p>	Surabaya, East Java
Udayani et.al. (2022)	Massage Therapy	72 (36 intervention group, 36 control group)	Quasi-experiment (pretest–posttest control group design)	Massage therapy effectively reduces postpartum depression scores compared to standard care.	Badung, Bali
Yulianti & Sam (2022)	Postpartum gymnastic and yoga	48 (24 gymnastic group, 24 yoga group)	Quasi Experimental Design (Pre-test and Post-test Two-Group Design)	<p>Postpartum gymnastic and yoga have been shown to be effective in reducing postpartum depression in women after cesarean sections.</p> <p>Postpartum gymnastic reduced the average EPDS score from 14.17 to</p>	Balikpapan, East Kalimantan

Author	Intervention	Sample size	Design	Result	Location
Wahyuni et al. (2022)	Routine midwifery care (Asuhan Kebidanan Rutin – AKR) and facial touch	70 (35 intervention group, 35 control group)	Quasi-experiment (pretest–posttest control group design)	9.62, while yoga decreased the EPDS score from 14.42 to 9.96. Routine Midwifery Care plus facial touch is significantly effective in reducing postpartum depression symptoms compared to routine midwifery care alone.	Pacitan, East Java
Anuhgera & Ritonga (2023)	Acupoint Meridian Massage	28 (14 intervention group, 14 control group)	Quasi-experiment (pretest–posttest control group design)	Acupoint Meridian Massage effectively reduces fatigue and prevents postpartum depression.	Lubuk Pakam, North Sumatera
Apriliana & Wintarsih (2023)	Laughter Therapy	58	Quasi-experiment (one group pretest-posttest design)	There is an effect of Laughter Therapy in reducing postpartum depression; 1. Before intervention \bar{x} EPDS=6.28 2. After intervention \bar{x} EPDS=4.38	Banten
Muspitha et al. (2023)	Combination of Mindfulness-Based Cognitive Behavioral Therapy (MCBT) and Assertiveness Training (AT).	76 (38 intervention group, 38 control group)	Quasi-experiment (pretest-posttest non-equivalent control group design)	The combination therapy of MCBT and AT was significantly more effective in reducing postpartum depression symptoms compared to deep breathing relaxation therapy.	Malang, East Java
Parwatiningsih et al. (2023)	Continuity of Care	30	Quasi-experiment (one group pretest-posttest design)	CoC has been shown to significantly reduce the incidence of postpartum depression. The average EPDS score decreased by 2.97 points.	Surakarta, Central Java
Hasanah et al. (2024)	Yoga	30 (15 intervention group, 15 control group)	Quasi-experiment (pretest–posttest control group design)	Yoga can help reduce symptoms of depression in postpartum mothers.	Banjarmasin, South Kalimantan

Author	Intervention	Sample size	Design	Result	Location
Illustri (2024)	Cognitive Therapy	Behavioral control group) 30 (15 intervention group, 15 control group)	Quasi-experiment (posttest control design)	There was a significant difference in postpartum depression scores between the intervention and control groups. Cognitive-behavioral therapy can reduce postpartum depression scores; 1. Intervention group \bar{x} EPDS=3.60 2. Control group \bar{x} EPDS=5.01	Palembang, South Sumatera
Rakhimah (2024)	Ginger Aromatherapy	30 (15 intervention group, 15 control group)	Quasi-experiment (pretest-posttest control group design)	Ginger aromatherapy significantly reduced EPDS scores and helped postpartum mothers return to normal emotional conditions. Before intervention: both group consist of 100% mild depression. After intervention: 1. intervention group 87% normal and 13% mild depression 2. control group 40% normal, 53% mild depression, 7% depression	Tegal, Central Java
Wulandari et al. (2024)	Yoga	32 (16 intervention group, 16 control group)	Quasi-experiment (pretest-posttest control group design)	Yoga significantly reduced postpartum depression and increased breast milk production in postpartum mothers. There was a significant difference in postpartum depression in the intervention group (pretest-posttest) after implementing yoga;	Kediri, East Java

Author	Intervention	Sample size	Design	Result	Location
				<ol style="list-style-type: none"> 1. intervention group \bar{x}EPDS=6.94, breast milk production 737.5 ml 2. control group \bar{x}EPDS=10.00, breast milk production 648.75 ml 	
Hanifah et al. (2025)	Digital psychological support (combination of CBT, relaxation, and mindfulness).	60 (30 intervention group, 30 control group)	Quasi-experiment (pretest–posttest control group design)	CBT and mindfulness-based digital interventions are effective in reducing depression and improving the well-being of postpartum mothers.	
Susanti et al. (2025)	Postpartum gymnastic and healthy diet	37 (18 intervention group, 19 control group)	Quasi-experiment (pretest–posttest control group design)	<p>There was a decrease in depressive symptoms in the intervention group;</p> <ol style="list-style-type: none"> 1. Intervention group: EPDS scores decreased (from 8.78 to 5.04), with a mean decrease of 3.74. 2. Control group: EPDS scores increased (from 7.42 to 8.89). 	Langkat, North Sumatera

3.2 Discussion

The review shows that non-pharmacological intervention approaches play an important role in the prevention and management of postpartum depression in Indonesia. Physical-based interventions such as massage [37][38][39] and acupressure [40][41] have been proven effective in managing depression. Massage can trigger parasympathetic nervous system activity and oxytocin release, which reduces physiological stress and strengthens emotional bonding, including mother-infant relationships [39]. Acupressure can activate myelinated nerve fibers in the hypothalamus and pituitary gland, contributing to the release of endorphins and serotonin to reduce stress and improve mood [41]. Additionally, physical activity helps individuals improve mood and enhance postpartum emotional coping skills [34]. Physical activities include postnatal exercise [42][43] and postpartum yoga [44][45].

According to a previous literature study by Paramudita et al., Cognitive Behavioral Therapy (CBT), both face-to-face and online, effectively reduces postpartum depression symptoms by helping mothers change negative perceptions of themselves into more solution-oriented thinking [46]. Mindfulness-Based Interventions significantly reduce the severity of postpartum depression and help patients replace negative memories and responses with positive emotions such as compassion and self-acceptance [47]. Mindfulness stimulates activity in brain regions that regulate self-awareness and behavioral control, enabling individuals to inhibit impulsive urges and strengthen reflective abilities concerning thoughts and emotions [48].

Psychological interventions such as CBT and Mindfulness-Based Cognitive Behavioral Therapy (MCBT) effectively alter negative thinking patterns and increase mothers' self-awareness, as demonstrated by Muspitha et al. who found a 3.18-point greater reduction in EPDS scores compared to the control group [49]. Similarly, CBT- and mindfulness-based digital support shows that technology can be an effective means for remote psychological interventions [33]. There has been a rapid increase in online mental health consultation services in Indonesia post-pandemic, proving to be an effective solution for mental health care in areas with limited professional resources [50].

Overall, empirical evidence consistently shows that CBT helps reconstruct negative thinking patterns through cognitive restructuring and successfully reduces depression by 29-46%, while supporting the role of health workers and digital therapy technology in improving postpartum maternal well-being [51]. Meanwhile, MBCT fosters stable self-awareness through mindfulness practice integrated with cognitive principles. MBCT provides the best intervention impact on postpartum depression, with an optimal intervention duration of 4 weeks, each session lasting ≤60 minutes, and completing the intervention three times a week for the best outcomes [47]. Both methods significantly influence improvements in psychological well-being and mother-infant bonding

Educational and psychoeducational approaches (e.g., studies by Rochana et al.) have been shown to increase breastfeeding self-efficacy and reduce depression through self-understanding and enhanced coping mechanisms [52]. This is supported by research from Meidora and

Purnamawati which states that psychoeducation plays an important role in psychosocial management of postpartum maternal mental disorders [53]. Education also needs to be provided to families and communities to change and renew attitudes and beliefs toward postpartum mood disorders and depression [54]. Psychoeducation and health education have the potential to be widely applied in Indonesia's primary care services, especially amid human resource limitations.

Spiritual interventions such as dzikir, prayer, and listening to murottal Quran serve as cognitive-affective relaxation forms rooted strongly in cultural and religious foundations. This is critical in Indonesia's context, where the community is religious and has a high spiritual response to psychological healing. Dzikir and prayer interventions conducted by Maimunah and Masita have become alternative efforts to alleviate postpartum depression with social, behavioral, and religious approaches [55]. Furthermore, listening to murottal Quran provides calmness and relaxation [56].

Continuity of Care (CoC) studies generally show varied results, depending on the quality, frequency, and competence of the healthcare professionals helping. Although some studies found no significant effects [35][36], a trend of effectiveness emerges when CoC is conducted comprehensively from the third trimester through the postpartum period [57].

A combination of multidimensional interventions is the most promising strategy because it integrates the preventive and curative elements of physical, psychological, social, and spiritual approaches [58][59][60]. Such models not only reduce depression but also strengthen mothers' psychological resilience in facing subsequent postpartum periods. Practically, these results reinforce the importance of integrating non-pharmacological interventions into maternal health programs in primary healthcare facilities. However, most studies are still limited in their non-randomized design, small sample sizes, and short follow-up periods, thus emphasizing the need for long-term research based on Randomized Controlled Trials (RCT) with control of social and environmental factors.

3 Conclusion

This literature review highlights the significant role of non-pharmacological interventions in preventing and managing postpartum depression in Indonesia. Psychological therapies, physical therapies, psychoeducation, and spiritual approaches show promising results in alleviating depressive symptoms, while combined multidimensional interventions integrating psychological, social, and spiritual components provide consistent benefits and strengthen maternal psychological resilience. However, variability in study designs, sample sizes, intervention duration, and follow-up periods necessitates further well-designed randomized controlled trials in Indonesia to establish standardized, evidence-based, and culturally relevant postpartum depression interventions. Integrating these interventions into primary healthcare services, with attention to local socio-cultural contexts and resource availability, is essential for improving maternal mental health outcomes nationally. This review emphasizes the need for comprehensive, culturally sensitive prevention and treatment strategies to address postpartum depression effectively within Indonesia's healthcare system.

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