



The Efficacy of Diverse Interventions for Postpartum Blues and Postpartum Depression: A Scoping Review

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ABSTRACT

Background: Postpartum blues is a common condition experienced by mothers after childbirth, and can progress to postpartum depression. Various interventions have been proposed to reduce these symptoms, but their effectiveness varies.

Objectives: This review aims to explore the effectiveness of various interventions in reducing symptoms of postpartum blues and postpartum depression.

Methods: This study followed a scoping review method based on PRISMA, with literature searches from major databases such as PubMed, ScienceDirect, and Scopus. Articles that met the inclusion criteria from 2020-2024 were analyzed using a descriptive approach.

Results: Thirteen studies were identified. Non-pharmacological interventions, including Mindfulness-Based Stress Reduction, app-based Cognitive Behavioral Therapy, and auricular acupressure, demonstrated a significant reduction in postpartum depression symptoms. For instance, a study on auricular acupressure showed a very large effect in reducing postpartum blues symptoms by day 10 after delivery. Physical interventions and social support also showed significant psychological benefits for postpartum mothers.

Conclusion: Non-pharmacological interventions, especially technology-based and mindfulness, are effective in reducing symptoms of postpartum blues and postpartum depression. Further research is needed to explore the long-term effects and clinical implementation of these interventions.

Keywords: *Postpartum Blues, Postpartum Depression, Intervention, Therapy*

INTRODUCTION

Postpartum blues is a mild mood disorder that is temporary and usually appears within the first 10 days after childbirth, with a peak occurring on days 3 to 5.^[1] The incidence of postpartum blues in Asia varies widely, ranging from 26-85%, while in Indonesia it is reported to range from 50-70%.^[2,3,4] This condition is important to note because around 5% to more than 25% of mothers with postpartum blues can develop into more severe and complex postpartum depression (PPD) if not treated properly.^[3,5]

Postpartum depression (PPD) is a serious public health issue that often remains undiagnosed and untreated, despite its significant prevalence in various countries.^[6,7] When experiencing PPD, many mothers report intense feelings of guilt and believe they are failing as mothers, often perceiving themselves as “bad mothers”.^[8,9] If left untreated, it will have an impact on both mother and baby, including developmental delays, more frequent illness, failure to thrive, and impaired mother-child interaction.^[10] Long-term implications of PPD include deterioration of the mother-infant relationship, delays in infant development, and impact on child behavior.^[11]

A major problem in addressing postpartum blues and PPD is the wide variation in prevalence and severity across countries, especially developing countries due to their large populations and high fertility rates, which require early diagnosis and treatment.^[12] Research shows that the incidence of PPD in high-income countries is 9.5%, in middle- and low-income countries it is 20.8% and 25.8%, respectively, which can be known that women in countries with limited resources are more vulnerable to PPD.^[10,13] Husband and family support, economic and work situations, and cultural aspects of childbirth are external factors that can cause PPD.^[14] Age, history of complications, occupation, finances, spousal support, and social support are all

factors associated with PPD.^[15,16] Knowledge about newborn care is significantly associated with the occurrence of postpartum blues. Mothers with low levels of knowledge may experience higher anxiety and a greater risk of postpartum mood disturbances, as seen in studies linking poor understanding of newborn care to increased emotional distress.^[17,18] Mothers experiencing postpartum blues often struggle to identify effective coping mechanisms, leading them to try various strategies until they find one that works best for them. These strategies typically range from problem-focused approaches to emotional coping techniques, depending on the individual's personal resources and support system.^[19,20] The role of health workers is a determinant of the occurrence of baby blues in postpartum mothers.^[21]

A number of interventions to address postpartum blues and PPD, including physical activity during pregnancy is associated with a lower risk of postpartum depression.^[22] Other studies have shown acupressure massage and effleurage massage to be effective in relieving symptoms of postpartum blues by stimulating the release of endorphins, thus helping to normalize physiological responses and improve maternal emotional well-being.^[23] In addition, foot massage therapy has been shown to reduce levels of fatigue and sadness in postpartum mothers.^[24]

The direct physical and emotional approach between mother and baby after childbirth not only fosters affection, but also improves psychological well-being as a first-line intervention to overcome postpartum blues.^[25] Research shows that cognitive behavioral therapy (CBT) with technology-based approaches, such as mobile applications that provide mental support and mindfulness, are effective for overcoming postpartum blues and reducing PPD symptoms.^[26] A systematic review showed that app-based interventions can improve Edinburgh Postnatal Depression

Scale (EPDS) scores, thereby reducing depressive symptoms in postpartum mothers.^[27]

To date, there has been no comprehensive scoping review mapping non-pharmacological interventions, including psychological and community-based interventions, targeting both postpartum blues and PPD. This creates a critical gap in understanding how early interventions can prevent the development of PPD and which strategies are most effective across different populations. The research question in this scoping review is: How effective are various interventions for postpartum blues and postpartum depression? This scoping review was conducted to synthesise existing evidence, identify gaps, and provide guidance for research and clinical practice in the field of maternal mental health.

METHODS

A scoping review method based on PRISMA was used in this study (Figure 1). Article searches were conducted in three major databases, namely PubMed, ScienceDirect and Scopus. The keywords used for the article search were organized based on the PICO Framework.

Table. 1 PICO Framework

P	Postpartum women with symptoms of postpartum depression/ postpartum blues
I	Physical, psychological, digital therapy-based interventions,
C	Standard care or no intervention.
O	Decrease in depressive symptoms (EPDS score)

The keywords used were: “postpartum blues”, ‘postpartum depression’, ‘postpartum women’, ‘postnatal care’, ‘intervention’, ‘therapy’, ‘support programs’, and ‘treatment’.

This study used the following inclusion criteria:

1. Articles published in the range of 2020-2024.
2. Articles involving the population of postpartum mothers with a diagnosis of postpartum blues/ depression.
3. Articles that discuss both pharmacological and non-pharmacological interventions (e.g., psychological therapies, social support, counseling, digital interventions).
4. English or Indonesian articles.
5. Articles that contained results about the intervention provided in reducing symptoms of postpartum blues/depression.

Exclusion criteria:

1. Articles that are not open access (not available in free full text)
2. Articles that did not focus on postpartum blues or postpartum depression interventions.
3. Articles that focus on other mental conditions without linking them to postpartum blues/depression. Textbooks, non-systematic reviews, or articles that did not empirically evaluate interventions.

After selecting articles that met the inclusion and exclusion criteria, the articles were independently reviewed by two researchers to avoid bias.

Articles that passed the quality assessment were analyzed using descriptive analysis methods, so as to interpret the results of the study and explain the relationship between the various interventions used and the results obtained in reducing postpartum blues. Descriptive narratives were used to present and explain the findings in depth.

RESULT

The literature search in the three databases resulted in 966 articles which matched the keywords used by the researchers. There were 335 duplicate articles and 601 articles that were not relevant because the population was not

mothers with postpartum blues or postpartum depression, did not use Indonesian or English, the research design was not RCT or quasi-experimental, and there was no research on the effectiveness of the intervention, so 35 articles were

obtained to be selected in their entirety. The selection resulted in 13 articles that met the research objectives, inclusion and exclusion criteria so that they could be included in this review.

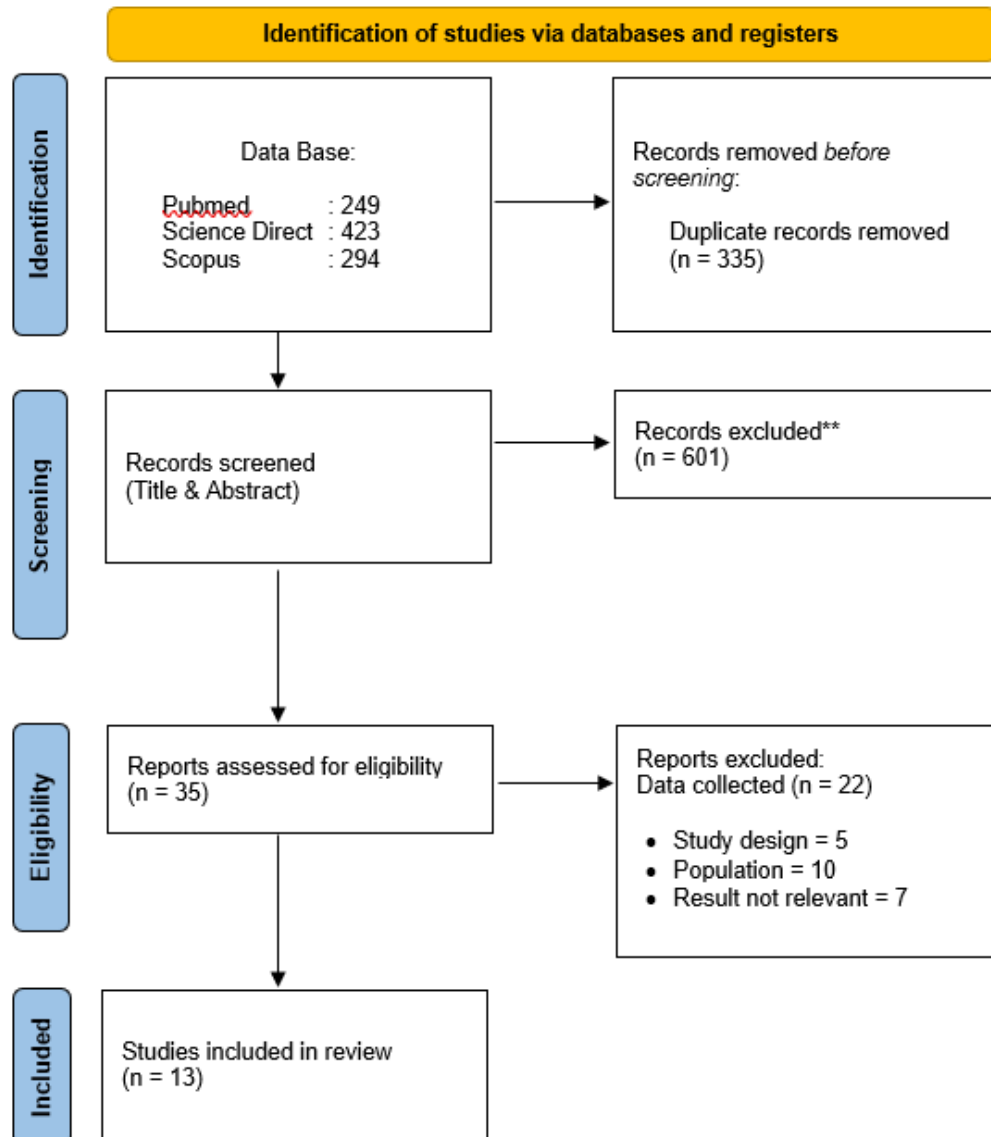


Figure 1. PRISMA Flow Chart

In this systematic review, thirteen studies were identified and evaluated based on the inclusion criteria. The studies focused on various pharmacological and non-pharmacological interventions to reduce symptoms of postpartum blues and postpartum depression.

Table 2. Article Findings

No	Author/ Year	Country	Title	Population	Intervention	Main Outcome	Study Design	Satisfaction/ Acceptance	Side Effects	Duration of Intervention & Observation
1	Gangka, N. A. T., et al (2024)	Indonesia	Effect The Intervention of Mindfulness-Based Stress Reduction (MBSR)	3 mother with postpartum blues	MBSR Program	The average score decreased after the intervention, but in participants 1 and 2 the average score after the intervention was still in the category of baby blues tendency. This was influenced by the participants' conditions (workload etc.).	Experiment	After MBSR, participants felt calmer, positive responses from participants	No Side Effect	for 5 days of baseline phase, 5 days of intervention phase. Consists of 7 sessions of 30 minutes duration each session
2	Zainab Alimoradi, et al. (2023)	Iran	Effect of auricular acupressure on postpartum depression	74 mother with postpartum blues	Auricular acupressure on ear points	The interventions were significant in reducing symptoms of postpartum blues and postpartum depression. On day 10 after delivery, acupressure successfully reduced the level of postpartum blues with a very large effect (SMD= -2.77). This significant effect continued until day 15, although slightly reduced, with SMD= -2.15. Not only that, acupressure was also effective in reducing postpartum depression on the 21st	RCT	Positive response, reduced fatigue	No Side Effect	2 intervention sessions with 5 days interval.

				postpartum day, with SMD = -0.74, indicating a moderate to large effect.				
3	Jannati, N., Iran et al. (2020)	Effectiveness of an app-based cognitive behavioral therapy (CBT)	39 intervention group, 39 control group postpartum depression mothers	CBT Application In the intervention group, the EPDS score decreased from 17 to 8 after the CBT application intervention, while in the control group there was no significant decrease. It was concluded that statistically significant ($p < 0.001$)	RCT	Helps reduce symptoms of depression, improves mental health of mothers	No Side Effect	There are 8 lessons for 8 weeks, each lesson is 45-60 minutes.
4	Teychenne, Australia M., et al. (2021)	Mums on the Move: A pilot randomised controlled trial (RCT)	62 postpartum mothers with mild to moderate depression	theoretically supported multicomponent programs including free in-home exercise equipment, access to smartphone web apps, and online forums) This study showed that a home exercise program did not result in significant changes in postpartum depression (PND) symptoms after 12 weeks. This is despite previous research indicating that aerobic exercise can be effective in reducing symptoms of PND,	RCT	Positive effects of re-establishing exercise routine, increasing self-awareness	No side effect	12 Weeks

5	Xinling Wang, et al. (2024)	China	Effects of Aromatherapy Massage Combined with TCM Emotional Release on Maternal and Neonatal Health	160 postpartum women with depression	consisted of 4 groups: Aromatherapy massage with sweet orange oil, TCM emotional release technique, combination of both, and control.	The study found that the combination group (aromatherapy massage+emotional release technique) showed a significant decrease in postpartum depression scores (EPDS), from an average of 21 before intervention to 8 after intervention. This group also had higher serotonin and dopamine levels than the other groups.	RCT	positive effect on mental health of postpartum mothers	No Side Effect	4 weeks, 60 min/session	60
6	R. Perkins, et al. (2023)	England	Online songwriting reduces loneliness and postnatal depression	89 postpartum mothers with depression	6-week online songwriting intervention (Songs from Home), control group with waiting list	The results showed a decrease in EPDS scores in the intervention group from 16 before intervention to 10 after intervention, with a decrease of about 30-40% at the end of the 6-week program and continued to improve until follow-up. At week 10, the difference in PND scores between the intervention and control groups was highly significant ($P < 0.001$).	RCT	showed a significant reduction in feelings of loneliness and increased social connectedness in postpartum women.	No side effect	6 weeks	

7	Lawrence, C.G. et al. (2024)	Canada	Effectiveness of a web-enabled psycho-educational resource for postpartum depression and anxiety	103 women the last months	PP Access to the PostpartumC are.ca platform for 4 weeks, followed by an evaluation two weeks later	The study showed that the intervention group experienced a decrease in EPDS scores from 14-16 before intervention to 9-11 after 4 weeks of platform use. The PASS (Perinatal Anxiety Screening Scale) score measuring anxiety also decreased from 28-30 to 22-24. Users reported high levels of satisfaction with the platform as a source of postpartum psychoeducational support.	RCT	Good overall (participants agree with the website's technical adequacy, content quality, specific content, and appearance)	No Side effect	4 weeks + follow up after 2 weeks
8	Liu, et al. (2022)	China	Positive intervention effect of mobile health application based on mindfulness and social support theory on postpartum depression	130 postpartum mothers	Use of the "We'll App" which combines mindfulness and social support for 8 weeks	The intervention with the app showed a significant decrease in postpartum depressive symptoms with a mean EPDS score from 13.08 to 10.94. Self-efficacy in parenting and perceived social support also significantly improved, while mindfulness did not significantly improve.	RCT	Positive (practical, no side effects)	no side effects	8 weeks

			symptoms of puerperae							
9	Corrado Garbazza et al. (2022)	Switzerland	Sustained remission from perinatal depression after bright light therapy: A pilot randomised, placebo-controlled trial	22 women with perinatal depression (PND) measured using EPDS (>12)	Bright light therapy (BLT) for 30 minutes every morning for 6 weeks	Results showed that 73% of the BLT group achieved remission (>50% symptom reduction and EPDS ≤ 12) compared to 27% in the control group. The therapeutic effect of BLT was maintained throughout the perinatal period without significant side effects	RCT	Positive (no distrust or rejection of BLT as a therapeutic tool)	No Side effects	6 weeks
10	Vigod, Simone N. et al. (2021)	Canada	Mother Matters: Pilot randomized wait-list controlled trial of an online therapist-facilitated discussion board and support group for	98 postpartum women with EPDS score > 9 and infants 0-12 months of age	The intervention group had access to Mother Matters (an online discussion group with a therapist facilitator) while the control group	The study showed a decrease in mean EPDS score from 14.5 to 11.3 in the intervention group, while in the control it decreased from 15.0 to 12.0. The remission rate was 37.8% in the intervention and 25.0% in the control, supporting the effectiveness of online discussion forums in addressing postpartum depression.	RCT	Good (almost all topics were rated as highly relevant, group cohesion, and satisfaction with the intervention was good) satisfaction with the	No side effects	10 weeks

			postpartum depression symptoms		received usual care.			intervention was good)		
11	Semiha Aydın Özkan et al. (2020)	Turkey	The effectiveness of an exercise intervention in reducing the severity of postpartum depression: A randomized controlled trial	65 postpartum women with EPDS ≥ 13	The intervention group underwent a 4-week physical exercise program, while the control group received only standard care.	After 4 weeks, the EPDS score in the intervention group dropped significantly from 16.41 to 7.29, while in the control group the score decreased from 15.74 to 12.54. The results show that physical exercise effectively reduces the severity of postpartum depression symptoms.	RCT	Positive (Exercise program is effective and cost-effective)	No side effects	4 weeks
12	Burcu Küçükkay, Işıl Can, Gamze Güler (2024).	Turkey	The effect of music played to new birth mothers on postpartum blues	82 postpartum mothers with baseline Stein Blues Scale (SBS) score ≥ 8 (moderate-severe)	Listening to traditional Turkish music (Uşşak tomb) for 30 minutes every 12 hours in the	The music group showed a decrease in SBS scores from 19 to 2 in 36 hours, compared to the control from 21 to 13. EPDS scores in the intervention group decreased more significantly than the control.	RCT	Positive (practical, cheap, and easily accessible)	No side effects	30 minutes/day for two days post-partum

				postpartum blues)	first 36 hours postpartum					
13	İlknur Gökşin, Sultan Ayaz-Alkaya (2020)	Turkey	The effect of progressive muscle relaxation on the postpartum depression risk and general comfort	70 primiparous mothers with EPDS score ≥ 12 (at risk of postpartum depression)	Progressive muscle relaxation exercises were performed 3 times a week for 8 weeks postpartum with audiotape guidance at home and weekly follow-up visits	The intervention group's EPDS score decreased from 7.0 to 5.2 after 8 weeks. There was no significant change in the control group. Maternal comfort level increased significantly in the intervention group compared to the control.	RCT	Positive (practical, easy and comfort-enhancing)	No side effects	8 weeks

The research keyword search resulted in 13 articles. The article review included results from both developed and developing countries. These countries include Indonesia, Iran, Australia, China, the UK, Canada, Switzerland and Turkey. The following table shows the distribution of countries mentioned in the articles.

Table 3. Country Distribution Table in the Article.

Country	Frequency
Indonesia	1
Iran	2
Australia	1
China	2
England	1
Canada	2
Switzerland	1
Turkey	3

This research evaluates various interventions to improve mental health in postpartum mothers who experience symptoms of postpartum blues and postpartum depression. By analyzing 13 studies, main themes were found that describe the intervention approaches used. These themes cover a variety of methods from group support to physiotherapy and digital platforms.

Table 4. Article Synthesis Results

Theme	Sub-Theme	No. Article
Use of Digital Media for Mental Health	Online Website Platform	[7], [10]
	Digital Application Platform	[3], [8], [10]
	Virtual Community Support	[7], [10]
	Online Consultation	[7], [10]
Physical Therapy Interventions	Aromatherapy Massage	[5]
	Physical Exercise and Sports	[4], [11]

Psychological Therapeutic Interventions	Progressive Muscle Relaxation	[13]
	Auricular Acupressure	[2]
	CBT Based Therapy	[3], [7], [10], [12]
	Mindfulness-Based Stress Reduction (MBSR)	[1], [8]
Innovative Intervention	Music Therapy	[6], [12]
	Bright Light Therapy	[9]

DISCUSSION

This scoping review aims to explore the effectiveness of various interventions in addressing postpartum blues and postpartum depression in mothers. Based on the findings obtained from the various studies reviewed, it can be concluded that there are several types of interventions that show effectiveness in reducing symptoms of postpartum blues and postpartum depression, including digital media-based interventions, physical therapy, and psychological therapy.

Digital media-based interventions, such as Cognitive Behavioral Therapy (CBT) applications, have been shown to be very effective in reducing symptoms of postpartum depression. Several studies have shown that mothers who participated in CBT programs through apps experienced a significant decrease in EPDS scores.^[28,29] This suggests that digital media, with its ease of access, can be an effective solution in helping mothers overcome mental health problems after childbirth. In addition, apps that combine mindfulness and social support, such as the We'll App have had encouraging results, showing a reduction in postpartum depression symptoms.^[30] In addition, the Mother Matters app is also a significant new e-health intervention to address postpartum depression.^[31] This intervention is conducted in groups, which

can increase efficiency rather than individually. The main advantage of this approach is the flexibility and ease of access that allows mothers to access the intervention anytime and anywhere, making it an attractive option especially in today's digital age.

On the other hand, physical therapy interventions have also shown significant results in treating postpartum blues and depression. Aromatherapy massage, combined with emotional release techniques, not only provides physical relaxation, but has also been shown to increase the levels of serotonin and dopamine, two hormones that play a role in improving mood.^[32] Physical exercise, performed through a moderate exercise program, has been shown to effectively reduce the level of postpartum depression, thanks to the increase in endorphins that occurs during physical activity.^[33,34] In addition, auricular acupressure has also shown promising results in reducing the symptoms of postpartum blues and depression, indicating that physical therapy approaches can be very effective for mothers experiencing postpartum depression.^[35]

In terms of psychological therapies, both Mindfulness-Based Stress Reduction (MBSR) and app-based CBT showed positive results in reducing symptoms of postpartum blues and depression. MBSR, which focuses on increasing self-awareness and stress management, has been shown to help postpartum mothers better manage feelings and stress that often arise after childbirth.^[36] On the other hand, CBT helps mothers identify and change negative thought patterns that contribute to depressive symptoms, thereby improving their mental well-being in the long run.^[28]

In addition, some innovative interventions, such as bright light therapy and music therapy, have also shown promising results. Bright light therapy has been shown to be effective in improving mood and helping mothers with perinatal depression to feel better,^[37] while music

therapy, which involves listening to traditional or specific types of music, showed a significant reduction in postpartum blues symptoms in a short period of time.^[38] Another study showed that an online songwriting intervention can reduce loneliness and PPD symptoms.^[39] While these therapies still require more research, preliminary results suggest that these interventions could be an attractive and accessible alternative option.

From these overall findings, it can be concluded that digital-based interventions such as CBT apps and platforms that incorporate social support are the most effective and efficient in addressing postpartum blues and postpartum depression. The advantage lies in accessibility and ease of use, which allows mothers to receive support anytime and anywhere, according to their needs. However, for mothers who are less comfortable with technology or have limited access, physical therapies such as aromatherapy massage and physical exercises can be an excellent alternative and provide significant benefits.

Selection of appropriate interventions should be based on the mother's individual preferences, severity of symptoms, as well as access to available services. A multi modal approach that combines different types of interventions may be the most effective strategy in addressing postpartum blues and depression as a whole. Therefore, it is important for healthcare providers to consider these factors in designing an appropriate treatment plan for postpartum mothers.

This scoping review has several strengths that reinforce its contribution to maternal mental health research. By including studies published between 2020 and 2024, this review presents a current synthesis of the latest evidence on interventions for postpartum blues and postpartum depression. The review covers a broad spectrum of psychological therapies to innovative non-

pharmacological approaches such as app-based cognitive behavioral therapy (CBT), mindfulness-based stress reduction (MBSR), aromatherapy, music therapy, ear acupuncture, and bright light therapy. This comprehensive coverage provides a holistic understanding of the available treatment options. The inclusion of studies from diverse resource environments, including countries such as Indonesia, Iran, Turkey, Canada, and China, further strengthens its relevance across various healthcare settings. Additionally, the emphasis on non-invasive and easily accessible interventions highlights practical solutions that may be particularly suitable for environments with limited mental health resources.

Despite these strengths, the review also has limitations. As a scoping review, it does not assess effect sizes or conduct meta-analyses, thereby limiting the ability to draw conclusions about relative effectiveness. Furthermore, the included studies varied in design, intervention duration, sample characteristics, and outcome measures, such as the differing use of the Edinburgh Postnatal Depression Scale (EPDS), which may have affected the consistency of findings. Most studies also focused on short-term outcomes, leaving the long-term effectiveness of interventions uncertain. Finally, excluding full-text articles that were inaccessible may have introduced selection bias, eliminating potentially valuable evidence.

CONCLUSION

This review highlights that various digital, physical, and psychological interventions are effective in reducing symptoms of postpartum blues and depression. Digital-based therapies, particularly CBT and mindfulness apps, offer accessible and efficient support, while physical interventions such as aromatherapy and exercise provide practical alternatives. Innovative approaches like music and light therapy show potential but require further research.

A multi modal approach tailored to individual needs may offer the most comprehensive support for postpartum mothers.

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