Journal Of Nursing Practice
https://thejnp.org/ Vol. 10 No.1 October. Page 173-192
ISSN: 2614-3488 (print); 2614-3496 (online) https://doi.org/10.30994/jnp.v10i1.1104

Non-Pharmacological Interventions for Various Perinatal Mental Health Disorders: A Scoping Review

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ABSTRACT

Background: Perinatal mental health disorders are a critical maternal health concern because their effects extend beyond mothers to infant development and family well-being. Non-pharmacological interventions offer safe and holistic approaches that may support maternal mental health while reducing concerns related to medication.
Purpose: This scoping review aimed to map the types, characteristics, and applications of non-pharmacological interventions for perinatal mental health disorders and examine their relevance to modern midwifery practice.
Methods: A scoping review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews framework. Literature searches were conducted on December 10, 2025, in PubMed, Scopus, Wiley, and Research Rabbit. Articles published in English or Indonesian during the past decade and addressing non-pharmacological interventions for perinatal mental health were included. Of 1,089 identified records, 10 articles met the eligibility criteria and were analyzed using a standardized data charting form.
Results: Five themes emerged: intervention types, delivery media, intervention content, provider characteristics, and barriers to implementation. Conclusion: Non-pharmacological interventions can strengthen maternal mental health through education, emotional support, and multidisciplinary collaboration. However, limited access, social stigma, and inadequate provider capacity remain important barriers to sustained implementation in midwifery practice.

Keywords : Mental Health Disorders, Non-Pharmacological Intervention, Perinatal Mental Health, Scoping Review

BACKGROUND

The perinatal period spanning pregnancy, childbirth, and the postpartum phase represents a transformative life stage for women, characterized by intricate biological, hormonal, psychological, and social shifts. These changes demand significant adaptive capacity; for

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Received: February 2, 2026; Revised: October 20, 2026; Accepted: October 23, 2026; Available Online: October 26, 2026
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many, they heighten susceptibility to mental health disorders, including perinatal depression, anxiety, psychological stress, adjustment disorders, and postpartum mood disturbances. Currently, perinatal mental health is recognized as a pressing public health concern due to its high prevalence and the far-reaching consequences it has on the mother, the infant, and the broader family unit (Ladyman et al., 2022),

Perinatal mental health disorders have emerged as a formidable global health challenge, with worldwide prevalence rates estimated at 10% among pregnant women and 13% for those in the postpartum period. These figures are notably more alarming in developing nations, where the incidence climbs to 15.6% during pregnancy and reaches 19.8% following childbirth (WHO, n.d.). Depression and anxiety represent the most prevalent conditions in this population, with global prevalence rates ranging from 10% to 20% and 10% to 24%, respectively. Notably, the clinical overlap between these two disorders is substantial, with comorbidity rates reaching as high as 40% (Fahmida et al., 2025) . Significant regional disparities are evident in perinatal mental health data. For instance, in South Carolina, USA, the prevalence of perinatal mood and anxiety disorders is recorded at 2.7%, with severe mental illness at 0.13%. In stark contrast, figures from Pakistan reveal a much heavier burden, with antenatal depression reaching 37%. Furthermore, postnatal depression in Pakistan shows a disturbing upward trend as the infant grows, climbing from 34.2% at three months to 43.1% by the end of the first year (Runkle et al., 2023) .

Perinatal mental health challenges, particularly depression and anxiety, are also prevalent among women in Indonesia. Localized research indicates that 17.5% of pregnant women in Banyumas Regency, Central Java, suffer from common mental disorders (CMDs). The situation was further exacerbated during the COVID-19 pandemic; in East Lombok, for instance, maternal stress, depression, and CMDs reached staggering rates of 86.3%, 26.5%, and 29.7%, respectively. Nationally, studies reflect a significant burden, with common mental disorders affecting 12.6% of expectant mothers and 10.1% of those in the postpartum phase (Ariasih et al., 2024) . Additionally, another meta-analysis reported that comorbid depression and anxiety during pregnancy and the postpartum period also occurred in approximately 9–10% of women, indicating a high burden of multiple mental disorders in the perinatal period (Fahmida et al., 2025).

Although the prevalence of perinatal mental health disorders is high, the approach to treatment is still dominated by a pharmacological approach. While the use of antidepressant and anxiolytic drugs during the perinatal period can provide clinical benefits, it is accompanied by significant limitations. A systematic review has identified concerns about the side effects of these drugs, potential exposure to the fetus or infant through the placenta and breast milk, and uncertainty about their impact on children's long-term development. These concerns often influence the decisions of medical professionals and mothers to start or continue treatment with (Brown, 2021) . This condition underscores the need for a robust approach to alternative or complementary management that is safer and more acceptable to perinatal mothers. The World Health Organization and international clinical guidelines recommend nonpharmacological interventions, particularly psychological and psychosocial ones, as primary or adjunctive therapies for perinatal mental health disorders, especially mild to moderate cases.

Nonpharmacological interventions are not only considered to pose minimal risk to mothers and their babies, but they also align with a mother-centered approach to care and its social context (Abdelaziz et al., 2025 ;Koç et al., 2024 ;Shariatpanahi et al., 2025) .

Perinatal mental health disorders and related conditions are an important concern because they may affect women's well-being and functioning during pregnancy and the postpartum period, with potential implications for maternal and family well-being. Previous reviews have examined non-pharmacological interventions for specific perinatal mental health disorders or conditions or particular intervention approaches. However, the available evidence remains heterogeneous and is distributed across different conditions, intervention approaches, and healthcare contexts. Although implementation barriers have been reported in previous studies and reviews, these barriers have not always been considered together with the characteristics of interventions, delivery settings, intervention providers, and reported outcomes. Therefore, this scoping review was conducted to systematically map non-pharmacological interventions provided to women experiencing perinatal mental health disorders and related conditions during pregnancy and up to two years postpartum within maternal and perinatal health services.

The novelty of this review lies in bringing these dimensions together within a single evidence map, providing a broader understanding of what non-pharmacological interventions are available, how they are delivered, by whom, where they are implemented, what outcomes are reported, and what barriers may affect their implementation. This integrated evidence may contribute to the development of contextually appropriate maternal and perinatal mental health services and inform consideration of integrating non-pharmacological interventions into routine care, particularly in low- and middle-income countries and other resource-limited settings

METHODS

Design and Setting

This study employed a scoping review methodology to systematically map the breadth and characteristics of available evidence on non-pharmacological interventions for perinatal mental health disorders and related conditions. A scoping review was selected because it is appropriate for exploring and mapping diverse types of evidence across a broad and heterogeneous field, including intervention types, delivery approaches, intervention providers, settings, outcomes, and implementation barriers(Munn et al., 2018). To ensure transparency, the review protocol was registered on the Open Science Framework (OSF) (DOI: 10.17605/OSF.IO/94JZN). The scoping review was conducted using the methodological framework proposed by Arksey & O'Malley, (2005), which comprises five stages: (1) identifying the research question; (2) identifying relevant studies; (3) selecting studies; (4) charting the data; and (5) collating, summarizing, and reporting the results. The review was reported in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) checklist (Tricco et al., 2018).

Determining the scoping review questions

The author used the PCC framework to develop the scoping review questions. Based on this framework, the author formulated the following question for the scoping review: "What

types of non-pharmacological interventions are provided by health services to address mental health issues in women during pregnancy and up to two years postpartum, and what are their characteristics?". The PCC framework was used to formulate the scoping review question. The resulting review question and its components are presented in Table 1.

Table 1. PCC Framework and Scoping Review Question

P (Population)	C (Concept)	C (Context)
Perinatal mothers with mental health disorders	non-pharmacological interventions	Health services

Eligibility Criteria

Based on the PCC framework and the research question, inclusion and exclusion criteria were established to determine the eligibility of studies for this scoping review. These criteria were applied during the screening and full-text assessment process to ensure that the selected studies were relevant to the review objectives. The inclusion and exclusion criteria are presented in Table 2.

Table 2. Eligibility Criteria for Study Selection

Inclusion	Exclusion
Population: Perinatal women experiencing mental health disorders or related perinatal mental health conditions. **Concept:** Non-pharmacological interventions for perinatal mental health disorders or related conditions, including psychological, psychosocial, educational, and supportive approaches. Articles reporting non-pharmacological interventions delivered during pregnancy or the postpartum period. Articles reporting barriers, facilitators, experiences, outcomes, or implementation aspects related to non-pharmacological interventions. Articles describing who provides or delivers the intervention. Study type: qualitative, quantitative, or mixed methods (obtaining a comprehensive overview). Publication period:Articles published within the last 10 years (ensuring up-to-date and relevant evidence). Full-text articles available.	Out of topic: To maintain the relevance and focus of the study with the objectives of the scoping review. The population in the article is irrelevant (to ensure the mapped results are relevant to perinatal mothers with mental health issues). The journal is not original (to map primary evidence from direct research results). The publication period is more than 10 years ago. The article is not available in full text.

Determining the Database Sources and Search Strategy

For this scoping review, relevant studies were systematically identified and selected based on the predefined eligibility criteria. The literature search was conducted using PubMed, Scopus, and Wiley Online Library as the primary databases. Research Rabbit was used as a

supplementary literature discovery tool to identify additional relevant studies through citation and reference mapping. To optimize the retrieval of relevant studies, a comprehensive search strategy was developed based on the Population, Concept, and Context (PCC) framework. The strategy combined keywords, synonyms, and Boolean operators (AND and OR). Medical Subject Headings (MeSH) terms were considered for the PubMed search, where applicable, while truncation symbols and database-specific search syntax were applied where appropriate. The search terms covered perinatal women, perinatal mental health disorders, non-pharmacological interventions, and intervention providers. The keyword structure and related terms used in the literature search are presented in Table 3.

Tabel 3. Search Strategy and Keywords Based on the PCC Framework

Component	Keyword	Synonyms/Related Terms
P (Population)	Perinatal women, pregnant women, postpartum women, postnatal women	Maternal, mothers, childbearing women
C1 (Mental Health Disorder)	Perinatal mental disorders, perinatal mental health, maternal mental illness	Depression, anxiety, postpartum depression, perinatal anxiety, mood disorders
C2 (Non-pharmacological Intervention)	Non-pharmacological interventions, psychosocial interventions, psychological interventions	Psychotherapy, counseling, CBT, mindfulness, peer support, psychoeducation
C3 (Intervention Provider)	Health care providers, mental health professionals	Midwives, nurses, psychologists, community health workers, lay providers

Article Selection

The article identification and selection process was conducted by researcher EH, with assistance from CP and AH, using two complementary search approaches to ensure broad coverage of the literature. The first approach involved systematic searches of PubMed, Scopus, and Wiley Online Library between December 10, 2025, and January 1, 2026. A total of 417 records were identified, comprising 197 records from PubMed, 210 from Scopus, and 10 from Wiley Online Library. All retrieved records were imported into Rayyan for reference management and screening. After four duplicate records were removed, 413 records remained for title and abstract screening. Of these, 341 records were excluded, and 72 full-text reports were assessed for eligibility. Sixty-seven reports were excluded because they did not meet the predefined inclusion criteria, leaving five studies from the database search.

The second approach involved supplementary literature discovery using Research Rabbit, with Evans et al., (2021) serving as the seed paper for citation and reference mapping. This search identified 672 records. During title and abstract screening, 659 records were excluded because they were not relevant to the review based on the screening criteria, leaving 13 potentially relevant reports for retrieval. Four reports could not be retrieved, and the remaining nine reports were assessed for eligibility. Four reports were excluded because their populations did not meet the inclusion criteria. The supplementary search identified five eligible studies through Research Rabbit. Overall, 10 distinct studies were included: five from

database searches and five from Research Rabbit. The selection process is illustrated in Figure 1.

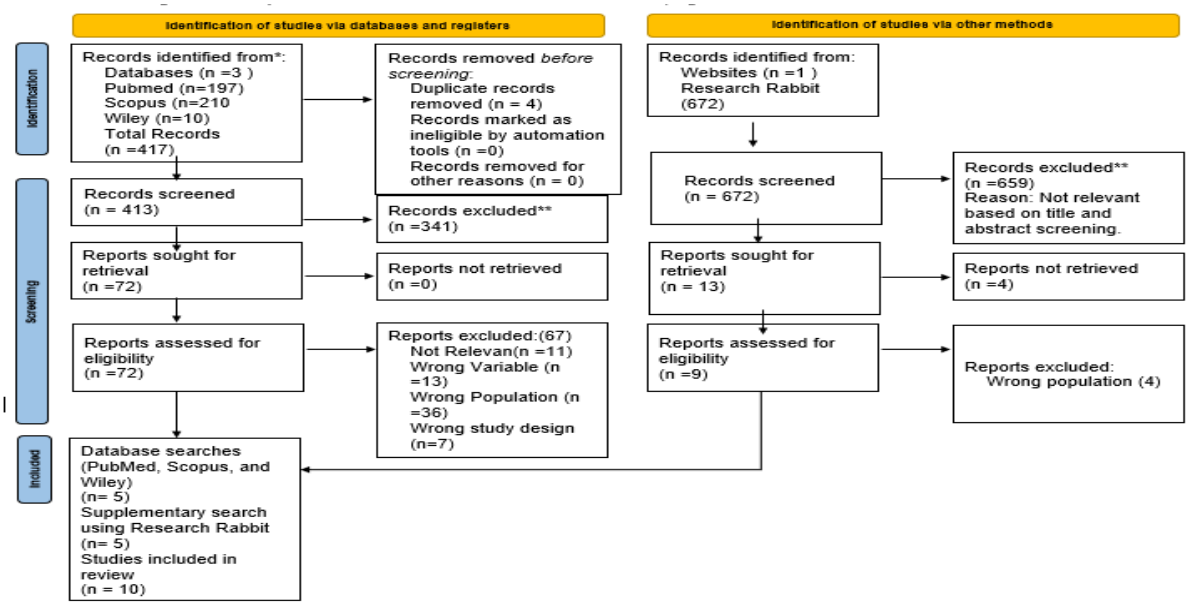


Figure 1. Flow diagram of the study identification and selection process.

Research Instrument and Data Collection

A data extraction form was developed to systematically collect study characteristics, including authors, publication year, country, objectives, methods, participants, sample size, perinatal mental health conditions, non-pharmacological interventions, settings, and key findings. Data were organized in a structured table to ensure consistency and facilitate analysis. The extraction form was reviewed and refined based on input from CP and AH. The characteristics and main findings of the included studies are presented in Table 4.

Author	Title	Objective and Intervention Provider	Country	Research Design	Data Collection Instruments	Sampling Technique and Number of Respondents	Data Analysis Method	Results
A1(Abdelaziz et al., 2025)	Digital intervention for tokophobia: a randomized controlled trial of internet-based cognitive behavioral therapy on fear of childbirth and self-efficacy among Egyptian pregnant women	Evaluation of the Efficacy of a Culturally Adapted Internet-Based Cognitive Behavioral Therapy Program for Childbirth-Related Anxiety (Tokophobia) and Maternal Self-Efficacy in Pregnant Women **Intervention Providers:** Two authors who are specialists in psychiatric mental health nursing and obstetric nursing.	Egypt (Damanhur City)	Randomized Controlled Trial (RCT). A parallel, randomized, controlled, single-blind design was used.	This study used three standardized instruments collected through face-to-face interviews at pre-intervention (T1) and six weeks post-intervention (T2). The first instrument was a structured sociodemographic and obstetric questionnaire to collect data on participants' baseline characteristics. The second instrument was the Childbirth Attitude Questionnaire (CAQ), a validated 16-item Likert-type instrument to assess fear of childbirth, with excellent reliability (α = 0.893) in the Arabic version. The third instrument was the short-form Arabic version of the Childbirth Self-Efficacy Inventory (CBSEI) (32 items), which measures women's self-efficacy in coping with childbirth.	A total of 169 pregnant women with moderate-to-severe fear of childbirth were screened; 96 met the eligibility criteria and were randomized into an intervention group (n=48) and a control group (n=48). At post-intervention, 76 participants completed the assessment (40 control and 36 intervention).	Data were analyzed using IBM SPSS Statistics version 27.0. Normality was assessed using the Shapiro–Wilk test. Categorical variables were analyzed using Chi-square or Fisher's Exact tests, while normally distributed continuous variables were compared using independent t-tests. Intervention effect size was measured using partial eta squared, and effectiveness compared with routine antenatal care was assessed using simple linear regression, with statistical significance set at $p < 0.05$..	Following the intervention, fear of childbirth decreased significantly and maternal self-efficacy increased in the intervention group ($p < 0.001$). Large effect sizes were observed for both outcomes, with $\eta^2 = 0.876$ for fear of childbirth and $\eta^2 = 0.600$ for self-efficacy. No significant changes were observed in the control group..

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A Rahman A et al. A2(2025)	Technology-assisted cognitive-behavioral therapy for perinatal depression delivered by lived-experience peers: a cluster-randomized noninferiority trial	To evaluate the effectiveness of technology-assisted peer-delivered therapy (THP-TAP) compared to the existing WHO-THP (Thinking Healthy Program) in treating perinatal depression. The goal was to demonstrate non-inferiority of THP-TAP. Intervention Provider: Peers acted as co-therapists, supported by a tablet application containing animated avatars, ensuring accurate therapy content and a focus on empathy and social support.	Pakistan (Rawalpindi countrys ide)	Single-blind, cluster-randomized, non-inferiority trial. This randomized controlled clinical trial (RCT) used a cluster-randomized, non-inferiority trial design to compare the effectiveness of THP-TAP (a digital app-based intervention guided by peers or mothers from the local community) with WHO-THP (a standard WHO program guided by health professionals or Lady Health Workers).	Intervention 1 (THP-TAP): Cognitive Behavioral Therapy (CBT)-based intervention (technology-assisted WHO-THP). Intervention 2 (WHO-THP): The standard WHO-THP program. Main Outcome Instrument: Remission from depressive episodes at 3- -months postpartum (measured using a standardized depression instrument).	The sample recruitment process began by identifying 2,861 pregnant women in their second or third trimester through public health registers in 70 village clusters in Rawalpindi, Pakistan. After eligibility screening and clinical assessment using the SCID instrument, 1,001 women were diagnosed with major depressive disorder, of which 980 women gave consent to participate in the final sample. The total sample was then randomly divided into two intervention groups: 421 women in the THP-TAP group (peer mentoring and app) and 410 women in the WHO-THP group (health professional mentoring) to analyze the effectiveness of recovery. And in	Subgroup analysis at three months postnatally showed significant findings in the subgroup with higher baseline PHQ-9 scores (>17) and older age (>27 years), with adjusted remission rate differences of 13.60% (95% CI, 6.57–20.63%) and 14.29% (95% CI, 8.73–19.85%), respectively. Although these analyses were prespecified in the trial protocol, no adverse events related to the intervention were reported in either the THP-TAP or WHO-THP groups during the trial. There were two cases of worsening maternal mental health due to domestic violence, one in each group, and both cases were referred to community health facilities for further care.	The primary outcome was remission of depressive episodes at 3 months postpartum. In 846/980 (86.3%) participants assessed at 3 months postpartum, the difference in remission rate was 8.91%, with a lower--bound of the one-sided 97.5% confidence interval of 4.25%, greater than the prespecified noninferiority margin of -10% (Pnoninferiority < 0.0001). In settings where health systems are weak and overloaded, THP-TAP offers an effective and potentially scalable alternative for delivering psychosocial interventions
A3(Shariatpanahi et al., 2025)	Effectiveness of Internet-Based Emotion-Focused Cognitive Behavioral Therapy (iECBT) with and without husband's participation in improvement of psychological distress in pregnant women with anxiety disorders: a randomized controlled trial..	To compare improvements in psychological distress between iECBT therapy involving husbands (with husband's participation) and iECBT involving wives alone (alone) in pregnant women with anxiety disorders. **Intervention provider:** Professional psychotherapists delivered sessions via online platforms (WhatsApp/Google Meet), with husbands participating as support groups.	Iran .	Randomized Controlled Trial (RCT) .	Intervention: Both groups received iECBT (8 sessions, 50 minutes/week). The iECBT group with husbands received additional sessions (8 sessions, 20 minutes/week) for the husbands. Instruments: 1. Spielberger State-Trait Anxiety Inventory (STAI) for Anxiety. 2. Brief Symptom Inventory 18 (BSI-18) for Psychological Distress. 3. Pregnancy-Specific Anxiety Scale.	A total of 84 pregnant women diagnosed with anxiety disorders were randomly assigned to two equal groups: iECBT alone (n=42) and iECBT with husband's participation (n=42). Participants received the intervention online.	SPSS version 24 was used for statistical analysis, including between-group and within-group comparisons. Statistical significance was set at $p < 0.05$.	Both iECBT with and without husband's participation improved state anxiety, psychological distress, pregnancy-specific stress, and emotion regulation. No significant differences were found between the two groups, indicating that iECBT with husband's participation was not superior to iECBT alone.
A4(Nakkuet al., 2021)	Group problem solving therapy for perinatal depression in primary health care settings in rural Uganda: an intervention cohort study	To evaluate the impact of a mental health intervention delivered by non-specialist health workers on the severity of perinatal depression in women in Uganda. **Intervention providers:** Non-specialist health workers, specifically public health nurses.	Uganda	Intervention cohort study using a stepped-care approach.	Group problem-solving therapy (PST) delivered by non-specialist health workers. Instruments: 1. 9-item Patient Health Questionnaire (PHQ-9) Luganda version (for screening and symptom severity). 2. WHO Disability Assessment Schedule 2.0 (WHODAS-2.0) (for disability).	"Women who scored ≥ 5 on the PHQ-9 and who were confirmed to have depression by a midwife were recruited into a treatment cohort..." Only mothers with confirmed depression (153 women) were ultimately included in the study group (treatment cohort) to receive therapy.	Negative regression analysis was used to examine changes in PHQ-9 and WHODAS-2.0 scores from baseline to endpoint. Data were analyzed using STATA version 14.	1. Depression: The mean PHQ-9 score decreased significantly between baseline (score 11.2) and endline at 6 months post-intervention (score 6.1) (P<0.001). 2. Disability: The mean disability score (WHODAS-2.0) also decreased significantly from baseline (score 32.5) to 6 months (endline) (score 16.9) (P<0.001)

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ISSN: 2614-3488 (print); 2614-3496 (online) https://doi.org/10.30994/jnp.v10i1.1104

A5(Evans et al., 2021)	Interpersonal counseling versus perinatal-specific cognitive behavioral therapy for women with depression during pregnancy offered in routine psychological treatment services: a phase II randomized trial	To assess the feasibility and acceptability of a trial of Interpersonal Counseling (IPC) for antenatal depression compared with low-intensity perinatal-specific Cognitive Behavioral Therapy (CBT), IPC intervention providers: Junior mental health workers were provided with a one-day specialized training	United Kingdom (UK)	A Phase II Randomized Controlled Trial (RCT), conducted at two centers.	Intervention 1 (IPC): Interpersonal Counseling, a shortened form of Interpersonal Psychotherapy (IPT), focuses on interpersonal relationship issues relevant during pregnancy. Intervention 2 (CBT): Low-intensity, perinatal-specific Cognitive Behavioral Therapy. Instruments:	Sampling Technique: Pregnant women with mild to moderate depression were recruited from routine health services and randomly allocated. Number of Respondents: A total of 52 pregnant women with mild to moderate depression were randomized. The subjects selected were mothers confirmed to suffer from mild to moderate depression based on the PHQ-9 screening results and confirmed clinical diagnosis using the Clinical Interview Schedule-Revised (CIS-R) instrument.	Recruitment. Of 60 subjects from 338 potentially eligible women (17.8%) during the nine-month recruitment period, the 95% confidence interval for recruitment was (13.9, 22.3%). Descriptive statistics for clinical and health economics domains. Outcome measures considered for the primary trial were reported according to allocation to IPC or CBT.	The measurement results showed an improvement in mood in both groups (EPDS score change IPC 4.4 (sd 5.1) and CBT 4.0 (sd 4.8)
A6(Husain et al., 2024)	Efficacy of a culturally adapted, cognitive behavioral therapy-based intervention for postnatal depression in British South Asian women (ROSHNI-2): a multicenter, randomized controlled trial	To assess whether a culturally adapted CBT-based group intervention (CBT) is more effective than usual care (CBT) in reducing depression in South Asian women in the UK. **Intervention Provider** These non-specialist workers were supervised by a CBT coach who observed at least one session and provided practical feedback.	United Kingdo	RCT (Randomized Controlled Trial) This study was a randomized controlled trial, with culturally tailored recruitment and internal testing, comparing PHP (intervention group) with treatment as usual (control group) in British South Asian women with depression.	Participants were randomized 1:1 into the intervention (PHP) or control group using an independent telephone service. Intervention Implementation: The PHP was implemented over 12 sessions, focusing on cultural issues and creating a safe space for participants. Data Collection: Data were collected at three time points: before the intervention (baseline), 4 months post-intervention, and 12 months post-intervention.	Women aged 16 years or older, met DSM-5 criteria for major depression, and had infants aged 0-12 months. Only Diagnosed Women Were Sampled: Only mothers whose depression diagnosis was confirmed through the CIS-R clinical interview were included in the study to receive the CBT intervention. 732 women were eligible and randomized to 368 in the intervention group and 364 in the control group.	The analysis used an intention-to-treat approach with random-effects logistic and linear regression models to compare depression outcomes between the PHP and control groups at 4 and 12 months, adjusting for key variables. Results showed that PHP was more effective in reducing depression scores, improving recovery, quality of life, and parenting competence, confirming the benefits of culturally adapted CBT for South Asian women.	Of the 732 women randomized to the PHP and control groups, the majority were of South Asian ethnicity with a mean age of 31 years. At 4 months, depression recovery was significantly higher in the PHP group compared to usual care, but this difference was not maintained at 12 months. These findings suggest that culturally adapted group CBT accelerates recovery from postpartum depression.
A7 (Danaher et al., 2023)	Trial of a patient-directed eHealth program to ameliorate perinatal depression: the MomMoodBooster2 practical effectiveness study	Evaluating the effectiveness of an eHealth program (MomMoodBooster2) in reducing depressive symptoms in women during the perinatal period (pregnancy and postpartum) in a real-world setting. The intervention provider was a non-medical coordinator from the NorthShore team who made phone calls to the mothers. Her role was limited to technical and administrative support.	United States	The Practical Effectiveness Study used a randomized controlled trial (RCT) design.	This study used a randomized controlled trial (RCT) design with a total sample of 207 perinatal women. Respondents were randomly divided into two groups: an intervention group (102 people) who received access to the digital therapy program MomMoodBooster2 (MMB2), and a control group (105 people) who received Treatment as Usual (TAU) or standard medical care along with a list of mental health support resources.	Assessments were conducted digitally at baseline, month 3, and month 6 using the PHQ-9 as the primary measure of depression, with an inclusion criterion of a score ≥10. Other instruments included the DSM-5 for major depression, the EPDS as a secondary measure of perinatal depression, and the GAD-7 for anxiety. Additional data included demographic characteristics and eHealth program usage logs.	Preliminary analyses examined the distributional properties of the measurements, baseline equivalence, and missing data. Intention-to-treat analyses of group effects were performed using fixed-effects growth models (SAS PROC MIXED; version SAS 9.4; SAS Institute Inc, Cary, NC) and estimated using maximum likelihood methods.	The MMB2 program demonstrated significant reductions in depression (PHQ-9) and anxiety (GAD-7), as well as higher remission rates compared to controls. In conclusion, MMB2 is an effective, easily accessible, CBT-based eHealth intervention for perinatal mothers with limited access to face-to- -face services.
A8(Milgrom et al., 2016)	Internet Cognitive Behavioral Therapy for Women With Postnatal Depression: A Randomized Controlled Trial of MumMoodBooster The six sessions cover mood monitoring,	Evaluating the effectiveness of an internet-based CBT program (MumMoodBooster) in supporting the clinical recovery of mothers experiencing postnatal depression.	Australia	Randomized Controlled Trial (RCT). This was a 2-arm, parallel RCT (N=43) comparing online CBT (n=21) with care as usual (n=22). At baseline and 12 weeks after enrollment, women's diagnostic status was assessed by telephone	Data were collected through the SCID (Structured Clinical Interview for DSM-IV) clinical interview for diagnosis, as well as digital self-administered questionnaires such as the PHQ-9 (Depression), GAD-7 (Anxiety), and QIDS-SR (Quick	A purposive sampling technique with strict inclusion criteria was used. The total respondents were 43 postpartum women diagnosed with Major Depression (MDD).	Researchers used ITT Analysis with Chi-Square Test to see who recovered, and Mixed-Effects Models to see how quickly depressive symptoms decreased from week to week.	A total of 79% of MumMoodBooster online CBT participants achieved depression remission compared to 18% in usual care, with a significant effect on BDI-II scores and high adherence and satisfaction.

	behavioral activation, identifying and restructuring negative thoughts, utilizing social support, and relapse prevention			using the Standard Clinical Interview for DSM-IV (SCID-IV) and symptom severity using the Beck Depression Inventory (BDI-II). Depressive symptoms were measured repeatedly throughout the study period using the Patient Health Questionnaire (PHQ-9).	Inventory of Depressive Symptomatology).			These results demonstrate MumMoodBooster's effectiveness for PND, increasing remission rates by approximately four times compared to TAU.
A9 (Hankin et al., 2023)	Effect of Brief Interpersonal Therapy on Depression During Pregnancy: A Randomized Clinical Trial	To evaluate improvements in depression (symptoms and diagnosis) among pregnant individuals from diverse backgrounds randomly assigned to receive brief interpersonal psychotherapy (IPT) compared with enhanced usual care (EUC). **Intervention Provider** Therapy was provided by board-certified doctoral clinicians, while the EUC group received standard OB/GYN care.	United States	Randomized, prospective, and evaluator-blinded clinical trial.	1. Symptom Checklist (SCL-20): To measure depressive symptoms (scale 0–80). 2. Edinburgh Postnatal Depression Scale (EPDS): To screen for maternal depression (scale 0–30). 3. Structured Clinical Interview for DSM-5 (SCID-5): To confirm a diagnosis of major depressive disorder (MDD).	Eligible participants underwent a baseline assessment and were then randomly assigned to either the IPT or EUC group using a computer, with stratification based on MDD diagnosis, gestational age, and Medicaid status. A total of 234 pregnant women (115 IPT; 119 EUC) were assessed three to five times during pregnancy from baseline to the end of pregnancy and received compensation for their participation.	Analyses were conducted using SAS 9.4 using an intention-to-treat approach. Differences were tested using the t/χ^2 test, and changes in depression were analyzed using hierarchical linear models for repeated measures (SCL-20, EPDS).	Compared with EUC, brief IPT showed significantly greater reductions in depressive symptoms (SCL-20, EPDS) and significantly reduced rates of MDD in late pregnancy. These results confirm that IPT is effective in reducing prenatal depression in pregnant women from diverse backgrounds .
A (Denni 10 s et al., 2020)	Telephone-based nurse-delivered interpersonal psychotherapy for postpartum depression: nationwide randomized controlled trial.	To test the effectiveness of nurse-delivered telephone interpersonal psychotherapy (IPT) for postpartum depression.	Canada	A nationwide randomized controlled trial (RCT) with masked intention-to-treat analysis (Singla et al., 2023). Intervention provider: Interpersonal psychotherapy (IPT) modified to be delivered by registered nurses	Methods: Telephone clinical interview and self-administered questionnaire Instruments: Structured Clinical Interview for DSM-IV (SCID-I) for depression diagnosis, Edinburgh Postnatal Depression Scale (EPDS) for depressive symptoms, State-Trait Anxiety Inventory (STAI) for anxiety, Dyadic Adjustment Scale (DAS) for relationship quality, and Experiences in Close Relationships (ECR) for attachment.	Participants were recruited through referrals and advertisements, screened with an EPDS score >12 and confirmed major depression using the SCID-I. The total sample consisted of 241 postpartum women (120 IPT, 121 control).	Statistical analysis using SAS version 9.4 hardware, including descriptive statistics, t-tests, x^2 analyses (or Fisher's exact tests), multivariable logistic regression models, and linear mixed models to assess change over time	At week 12, clinical depression remained in 10.6% of the IPT group vs. 35% of controls (OR 0.22), and EPDS >12 in 21.2% of IPT vs. 51% of controls (OR 0.26). There were no relapses in the IPT group through week 36, with consistent improvements in anxiety and partner relationships.

Summary and Reporting of Results

Because this study covers articles that use different methodologies, the researcher performed a critical appraisal to evaluate the quality of each article. The author used the Joanna Briggs Institute checklist to determine the quality of the articles. The author then used grades A, B, and C (Aromataris E, Lockwood C, Porritt K, Pilla B, 2024) .

Data Analysis

After the quality evaluation stage, the synthesis method was applied to the results. The data were analyzed descriptively and presented in tables and thematic narratives. This approach grouped the findings based on main themes that emerged from the articles. These themes included the type of intervention, the profile of the intervention provider, and the obstacles encountered when implementing perinatal mental health interventions (Arksey & O'Malley, 2005).

Ethical Considerations

This scoping review used secondary data obtained from previously published scientific articles and did not involve direct recruitment, interaction, or intervention with human participants. Therefore, the study did not collect identifiable personal information from research participants. Ethical considerations focused on maintaining academic integrity through accurate reporting, appropriate citation of the original sources, and transparent

Journal Of Nursing Practice
https://thejnp.org/ Vol. 10 No.1 October. Page 173-192
ISSN: 2614-3488 (print); 2614-3496 (online) https://doi.org/10.30994/jnp.v10i1.1104

reporting of the search, selection, data charting, and synthesis processes. The review was conducted in accordance with the methodological guidance for scoping reviews provided by the Joanna Briggs Institute (JBI) and the PRISMA Extension for Scoping Reviews (PRISMA-ScR) (Aromataris E, Lockwood C, Porritt K, Pilla B, 2024).

RESULTS

After a rigorous screening and eligibility assessment process, ten articles were selected for data extraction. The methodological quality of these articles was evaluated using the Joanna Briggs Institute (JBI) critical appraisal instrument. The methodological quality of the included studies was assessed using the appropriate Joanna Briggs Institute (JBI) critical appraisal checklist according to the study design. Detailed item-level assessments for each included study are provided in the supplementary material. The appraisal results are presented in Table 5.

Table 5. Results of the Critical Appraisal of Included Studies

No.	Method	Research Instrument	Grade
1	*JBI Critical Appraisal Checklist for Randomized Controlled Trials*	JBI	A
2	*JBI Critical Appraisal Checklist for Randomized Controlled Trials*	JBI	**A**
3	*JBI Critical Appraisal Checklist for Randomized Controlled Trials*	JBI	**A**
4	*JBI Cohort Studies Cohort Studies*	JBI	**A**
5	*JBI Critical Appraisal Checklist for Randomized Controlled Trials*	JBI	A
6	*JBI Critical Appraisal Checklist for Randomized Controlled Trials*	JBI	**A**
7	*JBI Critical Appraisal Checklist for Randomized Controlled Trials*	JBI	**A**
8	*JBI Critical Appraisal Checklist for Randomized Controlled Trials*	JBI	**A**
9	*JBI Critical Appraisal Checklist for Randomized Controlled Trials*	JBI	A
10	*JBI Critical Appraisal Checklist for Randomized Controlled Trials*	JBI	A

Characteristics of evidence sources

The classification of country income levels was based on the World Bank (2024). Six of the ten included studies (60%) originated from high-income countries, while four studies (40%) were from developing countries. The high-income-country studies were conducted in the United Kingdom, United States, Canada, and Australia, while Egypt, Iran, Pakistan, and Uganda represented the developing-country group. The distribution of the included studies according to country of origin and World Bank income classification is presented in Figure 2, showing the number and percentage of articles from each country.

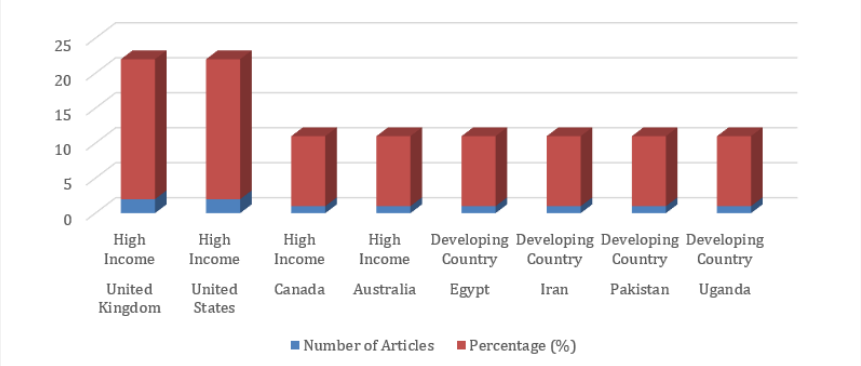


Figure 2: Article Analysis by Country of Origin

According to the research design, 90% (9/10) of the included articles were randomized controlled trials (RCTs), while 10% (1/10) were cohort studies. The distribution of the included

studies according to research design is presented in Figure 3, illustrating the proportions of randomized controlled trials and cohort studies among the included articles.

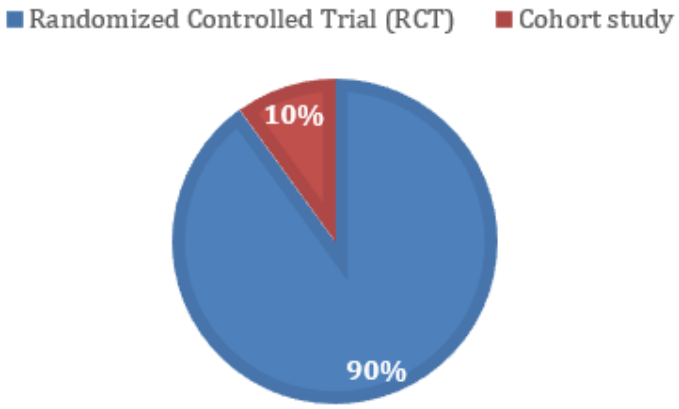
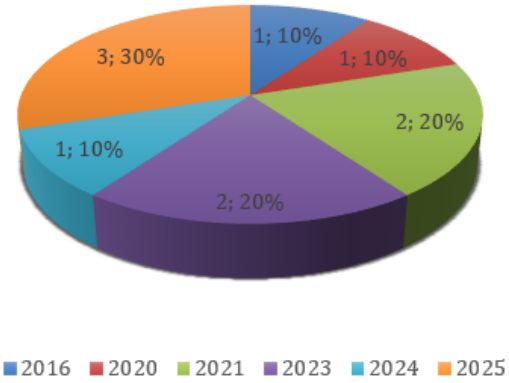


Figure 3: Analysis of Articles Based on Research Type

All ten articles (100%) received an A grade for methodological quality. However, limitations included restricted generalizability due to homogeneous participants and research settings, insufficient attention to social issues, short intervention durations, and limited long-term follow-up to assess intervention effectiveness and sustainability. The distribution of the included studies by publication year indicates that 2025 had the highest number of publications, accounting for 30% (n = 3) of the total studies. Publications from 2021 and 2023 each accounted for 20% (n = 2), while 2016, 2020, and 2024 each contributed 10% (n = 1). Overall, the findings show that publications on this topic were distributed across six publication years, with the largest proportion appearing in 2025. Figure 4 presents the distribution of the included



studies according to publication year.

Figure 4: Analysis of Articles Based on Quality Assessment and Year of Publication

Analysis and Mapping of Research Articles

In this stage, the author mapped all the selected articles based on characteristics such as topic, context, and main findings from several analyzed journals. The articles were presented in a table to facilitate understanding of the relationship between research themes in this scoping review. The Analysis and Mapping of Research Articles table is shown below. he results of the thematic analysis and mapping are presented in Table 6.

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https://thejnp.org/ Vol. 10 No.1 October. Page 173-192
ISSN: 2614-3488 (print); 2614-3496 (online) https://doi.org/10.30994/jnp.v10i1.1104

Table 6. Analysis and Mapping of Research Articles

No.	Theme	Subtheme	Analysis	Article Code
1.	**Type of Intervention**	**CBT (Cognitive Behavioral Therapy)**	**Digital & eHealth** (ICBT, MomMoodBooster, THP-TAP, iECBT) **ICBT:** Each module includes audio-visual presentations and instructional videos discussing topics delivered via WhatsApp groups **MMB2:** Includes video and audio recordings, animations, and editable lists in a browser-based web application that adapts responsively to each user's smartphone, tablet, laptop, or desktop device **THP-TAP**: Uses a technology assistant (avatar) guided by a local woman with similar life experiences **IECBT**: (WhatsApp/Google Meet), with the involvement of **husbands** as supporters in certain groups. **PHP**: CBT (Cognitive Behavioral Therapy) techniques adapted to the cultural values of South Asian women are delivered through independent long-distance telephone services.	A1, A2, A3, A6, A7, A8.
		IPT (Interpersonal Psychotherapy)	**IPT Short & Collaborative** (MOMCare) Individual therapy to enhance interpersonal skills and social support **Telephone-Based IPT** providing IPT intervention by telephone by nurses to overcome physical access barriers **IPC (Interpersonal Counseling)** Brief Talk Therapy A short version of IPT that focuses on linking symptoms of depression to specific social relationship problems[9] .	A9, A10, A5
		PST (Problem Solving Therapy	**Group PST** A closed group therapy that guides participants through 4 systematic steps of problem solving	A4
		EUC (Enhanced Usual Care)	**Standard Care + Support** Enhanced standard clinical care with eclectic counseling and psychoeducation on depression symptoms[11]	A9
2.	**Media**	**Application-based** (Independent, No Direct Interaction)	**ICBT** **ICBT Interaction:** No interaction with service providers; conducted independently through WhatsApp groups or responsive web applications. **THP-TAP** **Interaction:** Semi-self-directed; the application is guided by local women (*peers*) who provide empathy, but remain focused on digital tools.	A1, A7, A8, A2
		Phone-Based (Remote Interactive)	**IECBT Interaction:** Interactive; involves direct dialogue with therapists and active participation of husbands as supporters via WhatsApp/Google Meet **MMB2** Interaction: Interactive digital CBT intervention, supported by a website and low-intensity telephone training. **PHP (Cultural CBT)** **Interaction:** Interactive; conducted independently	A3, A6, A10

No.	Theme	Subtheme	Analysis	Article Code
			via remote telephone services. **Phone-based IPT** **Interaction:** Interactive; two-way communication via telephone provided by a nurse	
		Face-to-Face (Direct Physical Interaction)	**IPT (Momcare) and IPC/IPT (Individual Therapy)** **IPT Interaction:** Directly interactive; physical meeting between therapist and patient on a personal basis. **IPC Interaction:** Direct interactive; physical meeting between therapist and patient on a personal basis **Group PST** **Interaction:** Group Interactive; direct guidance by non-specialist health workers in a physical meeting setting	A9.A5,A4
3	**Content**	**Psychoeducation**	**Mental Health Education & Cognitive Models** Providing an understanding of the relationship between thoughts, feelings, and behavior. Includes education on perinatal depression, *mood tracking*, and cultural and religious approaches.	**A1, A2, A3, A5, A6, A7, A8, A9, A10**
		Cognitive Restructuring	**Thought Pattern Modification** Core techniques for identifying, challenging, and changing cognitive distortions or automatic negative thoughts related to childbirth and the role of motherhood using the ABC Model.	A1, A2, A3, A6, A7, A8
		Activation & Resolution Issues	**Emotional Regulation & Behavioral Activation** Application of relaxation techniques (breathing/muscle), planning positive activities, and a systematic 5-step problem-solving approach to address daily challenges.	A1, A2, A3, A4, A6, A8, A9, A10
		Termination	**Relapse Prevention** Focus on evaluating therapy outcomes, strengthening independent coping skills, and developing a long-term plan to prevent symptoms from reoccurring.	A1, A3, A4, A8, A9, A10
		Interpersonal Interaction	**Social Support & Relationships** Focus on communication with partners, resolution of interpersonal conflicts, enhancement of social support, and adaptation to changes in parental roles.	A1, A2, A3, A4, A5, A6, A8, A9, A10
4.	**Intervention Provider**	**Specialist Professionals**	Doctoral-level clinicians, professional psychotherapists, and specialists in mental health nursing and midwifery.	A1, A3, A9
		General and Junior Healthcare Personnel	Registered nurses, public health nurses, and junior mental health professionals who have received brief training.	A4, A5, A10
		Trained Non-Specialist Staff	Psychology team (students/psychologists) under senior supervision, as well as non-specialist workers who receive feedback from trainers.	A6, A8
		Community & Administrative Support	Peers with *lived* experience and non-medical *staff for technical/logistical assistance* and non-medical staff for technical/logistical assistance.	A2, A7
5.	**Barriers**	**Limitations in Access,**	Barriers related to limited access to the internet and digital devices, low interest or comfort in	A1, A3, A5, A10

No.	Theme	Subtheme	Analysis	Article Code
		Technology, and Service Resources	using technology, high initial costs of implementing digital interventions, and a shortage of mental health specialists and the need for training for health workers.	
		Methodological and Research Design Limitations	Limitations include small sample sizes, short intervention durations, and the absence of long-term follow-up, making it difficult to optimally evaluate the effectiveness and sustainability of intervention impacts.	A1, A3, A5, A7, A8, A9
		Limitations in Generalization and Socio-Cultural Context	The research results are difficult to generalize due to limitations in the research location, the homogeneous cultural and linguistic background of the participants, and the lack of accommodation for complex social issues such as domestic violence.	A3, A4, A6, A9, A10

Data Analysis (Synthesis of Results)

The 10 included studies identified various non-pharmacological interventions for perinatal mental health, including Cognitive Behavioral Therapy (CBT), Interpersonal Psychotherapy (IPT), Problem-Solving Therapy (PST), psychoeducation, peer support, enhanced usual care (EUC), and digital interventions. CBT was frequently represented through programs such as MomMoodBooster (MMB2), Internet-based CBT (ICBT), and Internet-enhanced CBT (iECBT) (A1, A2, A3, A6, A7, A8), while IPT included approaches such as MOMCare and telephone-based delivery (A4, A5, A9, A10). Interventions were delivered through digital applications, telephone or remote communication, and face-to-face sessions, using audiovisual materials, instructional videos, animations, peer-guided avatars, and direct interaction with trained providers (A2, A3, A4, A5, A6, A7, A8, A9, A10).

The interventions combined psychoeducation, cognitive restructuring, behavioural activation, problem-solving, relaxation, coping strategies, and interpersonal support, delivered by various trained professionals and community-based providers (A1–A10). Implementation barriers included limited technological infrastructure, internet access, digital literacy, trained personnel, and provider training, alongside cultural and language differences and difficulties maintaining participant engagement (A1–A10). Small sample sizes, short follow-up periods, and limited participant diversity further restricted generalizability, highlighting the need for context-adapted interventions, stronger professional training, and more comprehensive future research.

DISCUSSION

Summary of Key Findings

The findings of this scoping review indicate that non-pharmacological interventions for perinatal mental health include Cognitive Behavioral Therapy (CBT), Interpersonal Psychotherapy (IPT), Problem-Solving Therapy (PST), psychoeducation, peer support, and digital interventions, with CBT being the most frequently represented approach. These findings are consistent with previous reviews by Pettman et al., (2023) and Waqas et al., (2023)., which reported that CBT-based interventions can reduce perinatal depressive symptoms and may improve anxiety, stress, and perceived social support. Pettman et al., (2023) specifically found a medium overall effect of CBT on perinatal depressive symptoms, although substantial

heterogeneity existed across studies. The prominence of CBT may reflect its structured and adaptable approach to modifying maladaptive thoughts and behaviors. However, its potential benefits may vary according to intervention type, delivery format, control condition, and provider characteristics. Unlike previous CBT-focused reviews, the present review maps a broader range of non-pharmacological interventions and perinatal mental health conditions.

Digital interventions also emerged as a promising approach. Ching et al. (2023), in a systematic review and meta-analysis of 16 randomized controlled trials, found that technology-based CBT had a medium effect on perinatal depressive symptoms and a small effect on anxiety symptoms. Similarly, Anyanwu & Jenkins, (2024) reported a small but statistically significant effect of digital health interventions on perinatal depressive symptoms, with outcomes potentially influenced by delivery methods, facilitation, intervention timing, and duration. These findings highlight the potential of digital interventions to complement psychological and other non-pharmacological approaches in perinatal care. However, their implementation should consider individual needs, intervention characteristics, and healthcare contexts to support appropriate and effective delivery

The present review also identified several implementation factors, including digital literacy, access to technology, availability of trained professionals, organizational support, and user engagement. These findings provide an additional perspective to previous effectiveness-focused reviews, which primarily examined intervention outcomes. Evidence from digital peer support implementation research also demonstrates that implementation can be influenced by intervention characteristics, organizational readiness, available resources, users' knowledge and beliefs, and patient needs. Fortuna et al., (2023), for example, identified barriers related to intervention adaptability, complexity, cost, implementation readiness, access to knowledge, and individual characteristics, while available resources and perceived patient needs could facilitate implementation. Therefore, successful implementation of non-pharmacological interventions requires consideration of both intervention effectiveness and the context in which the intervention is delivered.

Peer support can provide additional social and emotional support for women experiencing perinatal mental health difficulties but requires appropriate training, supervision, organizational support, and privacy protection. Non-pharmacological interventions may involve different provider models, including telephone-based IPT, structured psychological interventions, and digitally supported CBT. Nurses and midwives may contribute to selected interventions, psychoeducation, and follow-up within their professional scope, supported by appropriate training, supervision, clear protocols, and referral pathways. In routine antenatal and postpartum care, a stepped-care approach could enable early identification, low-intensity support, referral to trained providers for structured interventions, and digital or telephone-based follow-up, while women with severe or complex needs are referred to mental health specialists. Implementation requires confidentiality safeguards, documentation, and coordination between maternal and mental health services.

Most studies originated from high-income countries, consistent with Anyanwu & Jenkins, (2024), who reported that digital interventions for perinatal depression were more commonly studied in these settings. This concentration may limit the transferability of findings

to low- and middle-income countries, where infrastructure, healthcare resources, professional availability, and service utilization differ. Therefore, interventions may require contextual adaptation. Across the 10 included studies, interventions varied in type, delivery mode, provider involvement, outcomes, and implementation requirements. This review contributes by integrating these dimensions into a single evidence map, highlighting that implementation depends on intervention characteristics, healthcare settings, available resources, provider capacity, and population needs. As a scoping review, its purpose was to map the breadth and characteristics of available evidence rather than estimate pooled effects or compare intervention effectiveness. Differences in study designs, populations, delivery methods, and outcome measures limit direct comparisons, although the studies provide complementary experimental and real-world implementation insights.

Overall, the findings support considering perinatal mental health interventions within a broader biopsychosocial and healthcare context rather than focusing solely on symptom reduction. Combining psychological approaches, digital delivery, psychoeducation, peer support, and professional involvement may improve access when interventions are adapted to local needs and resources. Future research should examine how evidence-based interventions can be implemented sustainably across diverse healthcare and socioeconomic contexts. Several limitations should be acknowledged: the search was restricted to PubMed, Scopus, and Wiley Online Library, with Research Rabbit used for supplementary searching; differences among studies limited direct comparisons; and some potentially relevant full-text reports could not be retrieved, possibly affecting the completeness of the evidence map.

Strengths And Limitations Of The Study

This scoping review provides a structured mapping of non-pharmacological interventions for perinatal mental health disorders, including intervention types, content, providers, implementation barriers, and methodological quality. However, most included studies focused on perinatal depression, limiting generalizability to underrepresented conditions such as anxiety and tokophobia. The predominance of studies from high-income countries may also limit transferability to low- and middle-income settings. Additionally, clinical diagnoses were not independently verified by the review authors, and some potentially relevant full-text articles could not be retrieved. Further research is needed to address underrepresented conditions and diverse socioeconomic and cultural contexts.

CONCLUSION

This scoping review mapped the types, characteristics, and applications of non-pharmacological interventions for perinatal mental health disorders and examined their relevance to contemporary multidisciplinary care and midwifery practice. Five themes emerged from the synthesis: types and characteristics of interventions, delivery media and modalities, intervention content and therapeutic components, provider characteristics and roles, and barriers and facilitators to implementation. The findings demonstrate that non-pharmacological interventions comprise diverse approaches that can be adapted to different needs, delivery settings, and healthcare contexts. Their implementation is influenced by

intervention characteristics, provider roles and competencies, accessibility of delivery modalities, and contextual barriers and facilitators.

The findings support the integration of non-pharmacological approaches within comprehensive and holistic perinatal mental health care. Their application extends beyond the role of midwives and requires collaboration among midwives, nurses, psychologists, psychiatrists, and other relevant healthcare professionals. Within their respective professional competencies, these providers can contribute to early identification, psychosocial support, therapeutic intervention, health education, referral, treatment, follow-up, and continuity of care. A coordinated, woman-centered, culturally responsive, and individualized approach is therefore important to address the diverse mental health needs of women during the perinatal period.

For clinical practice, healthcare services should strengthen integrated care pathways for early identification, referral, psychosocial support, intervention, and follow-up, with clear coordination among healthcare professionals. Adequate training, education, and resources are also needed to help professionals deliver or facilitate evidence-based non-pharmacological interventions within their scope of practice. As this scoping review maps the available evidence rather than evaluating the effectiveness of a specific intervention or care model, further research should explore intervention effectiveness, acceptability, feasibility, sustainability, and the experiences of women and families in real-world settings. Involving midwives, nurses, psychologists, psychiatrists, women, and families in future studies may help clarify professional roles, strengthen multidisciplinary collaboration, and support the development of culturally sensitive, woman-centered, and context-appropriate perinatal mental health services.

ACKNOWLEDGEMENTS

The authors would like to express their gratitude to the supervisor for the guidance and support provided throughout the study. The authors also acknowledge the researchers whose published works served as sources of evidence for this scoping review.

AUTHOR CONTRIBUTIONS

EH led the research and manuscript preparation and served as the corresponding author. CP and AH contributed to manuscript development, critical review, and revision. All authors read and approved the final manuscript and agree to be accountable for their respective contributions in accordance with the Journal of Nursing Practice (JNP) authorship criteria.

FUNDING DECLARATION

The authors received no grants or other financial support for this work. This scoping review was conducted without specific financial funding.

CONFLICTS OF INTEREST

The authors declare that they have no financial, professional, personal, or institutional conflicts of interest related to this scoping review.

DECLARATION OF AI USE

During manuscript preparation, the authors used ChatGPT (OpenAI) to assist with language editing and improving manuscript clarity, and Scopus AI to support preliminary literature exploration and identify additional relevant references. All AI-assisted outputs and suggested references were independently reviewed and verified by the authors against the original sources. The authors remain fully responsible for the content, originality, confidentiality, and integrity of the article.

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