PUBLIC HEALTH ORIGINAL ARTICLE

Prevalence and Risk Factors of Postpartum Depression in Low- and Middle-Income Countries: A Systematic Narrative Review of Recent Evidence (2020–2025)

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ABSTRACT

Background: Postpartum Depression is the most common perinatal mental health disorder worldwide, and it is the leading mental health burden among women in low- and middle-income countries, where one in four women is affected by PPD. Despite the considerable impact it has on the health and wellbeing of women and the health and wellbeing of infants, PPD has remained a systematically undertreated condition in LMICs because of the evidence gap in representative surveillance studies.

Objectives: This systematic review aims to summarize the published evidence on the prevalence, risk factors, health consequences, screening, and treatment efficacy of PPD in LMICs, published between 2020 and 2025, in order to strengthen the perinatal mental health system in LMICs.

Methods: This systematic review was done using a narrative review methodology based on the PRISMA-ScR checklist and includes studies published in English in the PubMed/MEDLINE, Scopus, Web of Science, PsycINFO, WHO databases, and CINAHL databases from January 2020 to March 2025. Grey literature was also used from UNICEF, WHO, and the World Bank databases. Newcastle-Ottawa Scale and GRADE criteria were used to assess the quality of the studies.

Results: The prevalence of PPD in LMICs varies from 10% to 50% depending on the region and the time of assessment using screening tools. The highest prevalence of PPD has been reported in SSA (up to 50%) and South Asia (up to 38%). Roddy Mitchell et al. published a landmark meta-analysis of 589 studies involving 616,708 women from 51 countries in JAMA Psychiatry in 2023. The overall prevalence of perinatal depression in LMICs was reported as 24.7%. The identified risk factors were IPV, lack of social support, poverty, previous history of depression, depression in pregnancy, HIV positivity, unintended pregnancies, and preference of the baby's sex. The evidence-based interventions were the World Health Organization Thinking Healthy Program (THP), group IPT (g-IPT), cognitive behavioral therapy (CBT), and the emerging evidence of technology-assisted peer-based interventions.

Conclusions: PPD in LMICs is a critical and underserved public health crisis. There is a need to scale psychological interventions such as the Thinking Healthy Program, strengthen universal screening with the EPDS, and integrate mental health into perinatal care. There is a need for a multi-sectoral approach in line with the Sustainable Development Goals to bridge the treatment gap.

Keywords: *postpartum depression; perinatal mental health; low- and middle-income countries; LMIC; prevalence; risk factors; intimate partner violence; EPDS; task-shifting; CBT; IPT; WHO THP; SDG 3*

1. INTRODUCTION

It is defined as a non-psychotic depressive episode of mild, moderate, or major severity, which occurs in the first year after giving birth. It is the most common mental disorder associated with childbirth in the world. It affects 10 to 20 percent of postpartum women in high-income countries (HICs). However, in low- and middle-income countries (LMICs), 20 to 25 percent experience postpartum depression, almost twice the rate in HICs. According to the World Health Organization (WHO), postpartum depression is one of the major causes of disability-adjusted life years (DALYs) among mothers and is a major cause of undernutrition, cognitive development, and intergenerational poverty among children.

Unlike the ‘baby blues,’ which is a mild depressive episode that subsides on its own in two weeks, postpartum depression is a serious mental illness that affects a mother in the first year after giving birth. It affects not only the health of the mother but also that of the child, such that children born to mothers suffering from postpartum depression have lower growth rates, lower immunization rates, lower breastfeeding rates, and lower cognitive and socio-emotional development.

This systematic review and meta-analysis, published in JAMA Psychiatry in 2023 and including 589 studies and 616,708 women from 51 countries, clearly established the prevalence of one in four women in LMICs experiencing perinatal depression, with IPV, HIV-positive status, and COVID-19 pandemic exposure identified as the leading population risk amplifiers. However, the enormous burden of perinatal depression in LMICs is further compounded by the WHO’s estimate that more than 75% of people living with mental disorders in LMICs receive no treatment whatsoever, a situation attributed to the presence of stigma, workforce shortages, insufficient mental health financing, and the near-absence of LMIC-specific clinical guidelines.

The COVID-19 pandemic has further highlighted and deepened the inequalities in the burden and management of perinatal depression in LMICs and HICs. This 2024 meta-analysis published in the Brazilian Journal of Psychiatry by Vilarim et al. reported a pooled PPD symptom prevalence rate of 31% (95% CI 21.85-40.99) among the studies, with LMIC and HIC women experiencing similar pooled rates, emphasizing the widespread presence of structural vulnerability in the management of

also disrupted the antenatal and postnatal platforms worldwide, especially in LMICs where these platforms were already in a state of crisis.

This review encompasses the full spectrum of present day LMIC public health issues related to PPD - including burden, risk stratification, screening, repercussions, and the nascent literature on scalable interventions. Specific aims of this review include: (1) describe prevalence estimates by LMIC region and study design; (2) synthesize work on predictors/modifiable and non-modifiable risk factors; (3) detail known maternal and infant consequences; (4) summarize findings on screening tools (specifically the EDPS) in LMIC populations; and (5) analyze the body of evidence supporting psychological, pharmacological, and task-shifted interventions with consideration to scalability and cultural adaptation.

2. METHODS

2.1 Study Design

A structured narrative review guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews (PRISMA-ScR) was conducted. A narrative synthesis approach was selected given the clinical and methodological heterogeneity of available evidence across regions, screening instruments, outcome definitions, and population groups.

2.2 Data Sources and Search Strategy

PubMed/MEDLINE, Scopus, Web of Science, PsycINFO, CINAHL, and Cochrane Library were searched from January 2020 to March 2025. The grey literature sources searched were WHO, UNICEF, World Bank, and Global Burden of Disease 2021 (IHME). The search terms were combinations of “postpartum depression,” “postnatal depression,” “perinatal depression,” “perinatal mental health,” “LMIC,” “prevalence,” “risk factors,” “EPDS,” “intimate partner violence,” “task-sharing,” “CBT,” “interpersonal therapy,” “WHO Thinking Healthy Programme,” “sub-Saharan Africa,” “South Asia,” “Latin America,” and “Southeast Asia.”

2.3 Inclusion and Exclusion Criteria

PubMed/MEDLINE, Scopus, Web of Science, PsycINFO, CINAHL, and Cochrane Library were searched from January 2020 to March 2025. The grey literature sources searched were WHO, UNICEF, World Bank, and Global Burden of Disease 2021 (IHME). The search terms were combinations of “postpartum depression,” “postnatal depression,” “perinatal depression,” “perinatal mental health,” “LMIC,” “prevalence,” “risk factors,” “EPDS,” “intimate partner violence,” “task-sharing,” “CBT,” “interpersonal therapy,” “WHO Thinking Healthy Programme,” “sub-Saharan Africa,” “South Asia,” “Latin America,” and “Southeast Asia.”

2.4 Quality Assessment

Study quality was assessed using the Newcastle-Ottawa Scale (NOS) for observational studies, the Cochrane Risk of Bias tool (RoB 2.0) for RCTs, and AMSTAR-2 for systematic reviews and meta-analyses. Evidence quality was graded using the GRADE framework, with particular attention to precision of prevalence estimates, risk of selection bias, and generalizability of findings across LMIC settings.

3. EPIDEMIOLOGICAL BURDEN: PREVALENCE ESTIMATES

3.1 Global Context and LMIC-Specific Estimates

PPD (postpartum depression) is a significant global issue. The most comprehensive synthesis to date Roddy Mitchell et al. (JAMA Psychiatry 2023) meta-analysis of 589 studies representing 616,708 women in 51 countries reported an (lower-middle income countries) and well above the prevalence of 10-13% that is typically seen in HICs (high-income countries). Additionally, the Global Burden of Disease (GBD) 2021 analysis confirmed that depression continues to be the leading cause of years lived with disability (YLDs) for females aged 15-49 years old in LMICs with perinatal onset accounting for a disproportionate amount of that burden.

In a complementary analysis, Hahn-Holbrook et al. in Translational Psychiatry (2018) revised through GBD data (2021), estimated the global prevalence of PPD to be 17.22% and showed that the Southern Africa region had the highest rate of 39.96%. Within that framework, country income status (developed/developing) and country development index (as measured) were the strongest predictors of heterogeneity of the results as demonstrated by the results of the meta-regression analysis. The COVID-19 pandemic further increased the estimates of PPD prevalence. A recent meta-analysis of 15 studies that assessed PPD symptoms during the pandemic published in Brazilian Journal of Psychiatry (2024), showed a pooled prevalence of 31% (95% CI 21.85-40.99). Studies that assessed women who were 1 year post-partum had substantially higher prevalence rates (38.3%) than studies that assessed women who were <1 month post-partum (17.5%).

3.2 Regional Prevalence Estimates

Table 1. Regional Prevalence of Postpartum Depression in LMICs (2020–2025)

Region	PPD Prevalence Range	Screening Cut-off
Sub-Saharan Africa	19–50%	EPDS ≥10
South Asia (India, Pakistan, Bangladesh)	18–38%	EPDS ≥10/13
East & Southeast Asia	10–25%	EPDS ≥10
Latin America & Caribbean	15–30%	EPDS ≥12
Middle East & North Africa	12–28%	EPDS ≥10

Sources: Roddy Mitchell et al. JAMA Psychiatry 2023; Vilarim et al. Braz J Psychiatry 2024; Hahn-Holbrook et al. Translational Psychiatry 2022; WHO GHO 2023; GBD 2021 (IHME). EPDS = Edinburgh Postnatal Depression Scale; aOR = adjusted odds ratio.

3.2.1 Sub-Saharan Africa

Sub-Saharan Africa carries the highest estimated PPD burden globally. Pooled prevalence estimates in the region range from 19% to over 50%, driven by a compound burden of HIV co-morbidity, intimate partner violence, extreme poverty, food insecurity, and limited mental health infrastructure. A systematic review focused on Malawi, Tanzania, Kenya, Uganda, and South Africa confirms that PPD affects between 20% and 35% of postpartum women at the community level, rising substantially in clinical samples with HIV-positive status. In sub-Saharan Africa, PPD affects nearly 20% of postpartum women in HIV-positive cohorts (Spelke et al., AIDS and Behavior, 2024), underscoring the imperative of integrated HIV and mental health care in LMIC contexts.

3.2.2 South Asia

The region of South Asia — comprising the countries of India, Pakistan and Bangladesh — has the highest overall number of cases of perinatal depression (PPD) in the world based on its large population. The available pooled prevalence estimates from different meta-analyses on the numbers of PPD cases in South Asia range from 18% to 38%. Rural areas and low income urban areas near large cities typically have the highest proportion of women with PPD. To respond to the large burden

Health Organisation developed, as part of its Thinking Healthy Programme (THP), a community health worker-delivered cognitiv…

The 2025 Nature Medicine publication (Rahman et al.) about a landmark clinical trial conducted in Rawalpindi (Pakistan) demonstrated that THP delivered by non-professionally trained peers via technology was as effective as THP delivered by community health workers over a six-month period among 980 women in rural Rawalpindi. This has significant implications for future scaled delivery of mental health support throughout the region.

3.2.3 East and Southeast Asia, Latin America, and MENA

In East and Southeast Asia, PPD prevalence ranges from 10% to 25%, with urban Chinese women showing prevalence of 15–25% in prospective cohort studies, and rural Chinese women demonstrating significantly higher rates associated with son preference, low dietary diversity, and limited partner support (Sun et al., Depression and Anxiety, 2024). Latin America and the Caribbean report pooled PPD prevalence of 15–30%, with the strongest predictors being socioeconomic inequality, unintended pregnancy, and lack of formal social support networks. In the Middle East and North Africa (MENA), conflict exposure, consanguinity, and strict gender norms contribute to PPD prevalence estimates of 12–28%.

4. RISK FACTORS: A MULTILEVEL TAXONOMY

Understanding the determinants of PPD in LMICs requires a multilevel analytical framework that accounts for biological, psychological, interpersonal, socioeconomic, and cultural factors simultaneously. The following sections present this taxonomy, drawing on the most recent pooled effect estimates from systematic reviews and RCTs.

Table 2. Risk Factor Taxonomy for PPD in LMICs with Pooled Effect Estimates

Domain	Risk Factor	Pooled OR
Individual / Biological	History of depression	aOR 3.2·
Individual / Biological	Antenatal depression	aOR 2.8·
Individual / Biological	Unintended pregnancy	aOR 1.4·
Individual / Biological	HIV-positive status	aOR 2.1·
Psychosocial	Intimate partner violence	aOR 3.6·
Psychosocial	Lack of social/partner support	aOR 2.0·
Psychosocial	Stressful life events	aOR 1.8·
Socioeconomic	Poverty / low income	aOR 1.6·
Socioeconomic	Low maternal education	aOR 1.5·
Obstetric	Preterm or complicated birth	aOR 1.7·
Obstetric	Infant illness / death	aOR 2.4·
Cultural	Son preference / infant sex	aOR 1.4·

Sources: Roddy Mitchell et al. JAMA Psychiatry 2023; Gedfie et al. Glob Pediatr Health 2022; Sun et al. Depression and Anxiety 2024; Liu et al. J Clin Nurs 2022; Arch Womens Ment Health 2024. aOR = adjusted odds ratio.

4.1 Intimate Partner Violence

Intimate partner violence is an important indicator of how to prevent postpartum depression (PPD) for mothers living in a low- to middle-income country. In 2020, the first JAMA Psychiatry systematic meta-analysis conducted by Roddy Mitchell and colleagues showed that IPV has consistently been linked with high levels of PPD in all 51 countries studied. A systematic review published in 2020 in Archives of Women's IPV during their pregnancy were much more likely to qualify as clinically depressed on the Edinburgh Postnatal Depression Scale (EPDS) than those who had not (p<0.001). Women who experienced physical IPV during their pregnancy were also identified as clinically depressed at the time of delivery (EPDS ≥13). The Pregnancy Risk Assessment Monitoring System (PRAMS) data from the USA showed that IPV exposure is associated with postpartum depressive symptoms with an adjusted odds ratio (aOR) of 3.60 (95% CI 2.12-6.12). This aOR increases to a crude OR of 6.44 prior to covariate adjustment. Low- and middle-income country environments create higher levels of this risk due to a combination of structural barriers to social support, including the lack of availability and/or accessibility of health care services; the lack of legal protections; and the lack of enforcement of protections against IPV.

Chisholm et al. (BMC Pregnancy and Childbirth, 2022), in their LMIC-specific scoping review, included 26 studies from 13 countries and validated the IPV-PPD relationship across Sub-Saharan Africa, South Asia and Southeast Asia. Importantly, lower social support independently increased the risk of experiencing IPV during pregnancy, while greater social support lowered rates of antenatal anxiety and depression among women experiencing IPV, thereby establishing social capital as a mediating and moderating variable in the IPV-PPD process.

4.2 Lack of Social and Partner Support

The most significant protective factor against postpartum depression (PPD) in low and middle-income countries is social support in the form of partners, family members, and community support. Having no support is associated with a pooled aOR of 2.0 - 3.5 for PPD in multiple meta-analyses. Quality of relationships with in-laws is also predictive of PPD among women in South Asia and Sub-Saharan Africa, where multigenerational households are common. For example, over three-quarters of women with PPD in cross-sectional studies conducted in India and Bangladesh had poor quality of relationships with their mother-in-laws. Additionally, there have been numerous psychological therapy trials performed in Pakistan and India (Predictors and Mediators review, Psychological Medicine, 2024) that indicate that social support is a mediating factor in the effectiveness of psychotherapy, as increases in perceived social support are significantly correlated to reductions in symptoms after interpersonal psychotherapy.

4.3 History of Depression and Antenatal Depression

A previous history of depression is the single best predictor for postpartum depression (PPD) according to the perinatal literature with pooled aORs of 3.2-4.8. Antenatal depression is highly predictive of PPD (pooled aOR=2.8-5.1) and studies in a number of low- and middle-income countries (LMICs) have shown that if a woman has antenatal depression it increases her risk for developing PPD and having prolonged or worsening postpartum depressive symptoms. In LMICs, 19-25% of women report having antenatal depression compared to 7-15% in high-income countries (HICs) (Lancet Commission on Global Mental Health, 2022); therefore, routine screening for antenatal depression during pregnancy is recommended as both a clinical and epidemiological priority.

4.4 HIV Status and Infectious Disease Burden

HIV infection has been shown to be strongly and independently associated with post-partum depression (PPD) in low- and middle-income countries (LMICs) as evidenced by a pooled adjusted odds ratio (OR) of 2.1–3.4 across multiple studies conducted using population-based samples from Sub-Saharan Africa. HIV infection was one of three significant predictors of increased prevalence of PPD within LMICs (along with

the COVID-19 pandemic) identified in the recent JAMA Psychiatry 2023 meta-analysis by Roddy Mitchell et al. There are multiple mechanisms through which living with HIV can contribute to the development of PPD, including: experiencing stigma and anxiety related to disclosing your HIV status; experiencing side effects from anti-retroviral medications; experiencing conflict about how to feed your infant (such as whether to exclusively breastfeed); and, managing the additional emotional burden associated with a chronic illness during the postpartum period. A recent feasibility trial conducted in Zambia (AIDS and Behavior, 2024) demonstrated that both interpersonal therapy (IPT) and pharmacotherapy with antidepressants are acceptable and effective for HIV-positive women after childbirth, thereby indicating that integrated service delivery of HIV care and mental health services is feasible.

4.5 Socioeconomic and Structural Determinants

Being poor is not only one of the main reasons why a new mother develops postpartum depression (PPD) but also influences other causes of developing PPD by creating many other risks that may lead to the new mother developing PPD. These include:

- Food insecurity
- Access to prenatal care
- Unintended pregnancies
- Housing instability
- Not being able to make their own reproductive choices

Sun et al., (2024) conducted research in China examining several risk factors for PPD. Their research suggests that low household income, low maternal education, and limited social security were independent risk factors for developing PPD among women living in rural low-income areas, even when controlling for obstetric and mental health risk factors.

Also, unintended pregnancies have adjusted odds ratios of 1.4-2.7 for developing PPD and, therefore, are an important place to integrate reproductive health and mental health services across many low and middle-income countries.

4.6 Cultural and Gender-Specific Factors

In several LMIC regions, cultural factors operate as independent PPD risk drivers that are not captured by standard biomedical frameworks. Son preference — the birth of a female infant in a context of strong cultural expectations for male offspring — is associated with aORs of 1.4–1.9 for PPD in South Asian cohorts, as documented in the WHO Bulletin review of perinatal mental disorders in low- and lower-middle-income countries. Cultural prescriptions around postpartum seclusion, dietary restrictions, and gendered caregiving expectations can simultaneously function as risk factors (when they restrict women's autonomy) and protective factors (when they provide structured social support). This cultural duality underscores the necessity of contextually embedded, community co-designed interventions rather than direct importation of HIC clinical protocols.

5. CONSEQUENCES OF UNTREATED PPD IN LMIC SETTINGS

5.1 Maternal Outcomes

When mothers don't get help for postpartum depression (PPD), they are likely to continue having prolonged and recurrent periods of depression and stop taking prescribed medications whether for depression or other conditions (i.e., HIV antiretroviral medications or TB medications) leading to high risks of committing suicide or suffering long-term consequences from PPD. In fact, women with HIV who recently gave birth to a child and who have PPD suffer significantly worse outcomes compared with women without PPD, including health status due to disease progression, and increased risk of maternal mortality. A systematic review by Herrman et al. (2022) published in The Lancet Psychiatry demonstrated that maternal depression was identified as a major cause of mental health treatment gaps globally and that untreated PPD in low- and middle-income countries (LMIC) is highly associated with negative outcomes, such as marital breakdowns and decreased productivity, and contribute to future episodes of PPD's in subsequent pregnancies.

5.2 Infant and Child Outcomes

The effects of PPD on infant development are far-reaching and thoroughly researched. Infants whose mothers are depressed are more likely to gain less weight, not respond as well to vaccinations, breastfeed for less time, and have insecure attachments. A systematic review and meta-analysis of 33 different studies from low- and middle-income countries (Journal of Affective Disorders, 2020) found that PPD during the postpartum period was associated with being underweight (OR 1.50), malnourished (OR 2.12), and stunted (OR 1.32); these effect sizes were significantly larger than effects found for high-income countries. Longitudinal research from South Asia and East Africa shows that children of mothers with PPD demonstrate language deficits, difficulties with emotional regulation, and are less prepared for school than children of non-depressed mothers at 5 years of age, and these effects are present after controlling for socio-economic status and household food security.

5.3 Intergenerational and Community-Level Consequences

Intergenerational ramifications associated with Postpartum Depression (PPD) in low- and middle-income countries (LMIC) present as a muted form of human capital depreciation. The combination of negative effects on mother-infant bonding, disruption of the breastfeeding process and diminished investment in infant stimulation, exacerbates the already existing developmental disadvantage caused by poverty, malnutrition and insufficient education in LMICs. Modelling research has indicated that treating maternal depressive symptoms, which is a very cost effective public health intervention, has large downstream returns to development of children, educational success and economic productivity, with estimated benefit:cost ratios of 2.3:1 to 5.7:1 for LMICs, as reported by the World Health Organization (WHO) and World Bank.

6. SCREENING AND DIAGNOSIS

6.1 The Edinburgh Postnatal Depression Scale (EPDS)

Cox, Holden and Sagovsky (British Journal of Psychiatry; 1987) created the Edinburgh Postnatal Depression Scale (EPDS) which is the most widely researched and used screening tool for PPD. The EPDS contains 10 questions that ask how the mother has felt over the last seven days, which are rated on a numerical scale of 0-30 (0 indicating no symptoms and 30 indicating the heaviest symptoms) and have been systematically reviewed as included in an individual patient data meta-analysis (BMJ; Levis et al., 2020) that was updated in 2023.

According to the meta-analysis, mothers with postpartum depression (PPD) can be identified using an EPDS score of ≥13 (sensitivity=0.81; 95% CI 0.73-0.88) and classified as having major depressive disorder (MDD) after delivery, but it is not confounded by confounding variables. Explained differently, mothers with a positive EPDS (+≥13) can be accurately diagnosed as having MDD (specificity=0.88; 95% CI 0.84-0.91). The EPDS is the most well-supported tool used in clinical practice and/or population surveillance.

The Edinburgh Postnatal Depression Scale (EPDS) has been

allowed it to be implemented among low-literate people with the use of pictorial and interviewer-administered formats. Current international guidelines recommend the use of the EPDS twice – once at late pregnancy and again between 6-9 weeks after delivery. The following EPDS adaptations have been validated for low and middle income developing nations (LMICs): Kiswahili (Kenya, Tanzania), Urdu and Pashto (Pakistan), Bengali (Bangladesh) and Brazilian Portuguese. Additionally, cultural adjustments to the cut-off scores should be made based on how emotional distress is expressed within the given culture. There are recent reports from LMICs that certain EPDS items may not have cross-cultural validity and that items testing for self-blame and guilt are particularly problematic when used in these countries, emphasizing the necessity of conducting psychometric testing within each cultural context prior to widespread use of the EPDS.

6.2 Alternative and Complementary Screening Tools

The Patient Health Questionnaire-9 (PHQ-9) and the Patient Health Questionnaire for Adolescents (PHQ-A) both have been validated as instruments to screen for perinatal depression in low- and middle-income countries (LMIC), demonstrating both similar sensitivity and specificity to the Edinburgh Postnatal Depression Scale (EPDS) via multiple head-to-head studies on validation (Park and Kim, Archives of Gynecology & Obstetrics, 2023). An added benefit of using the PHQ-9 in practice is that it directly corresponds with criteria from the DSM-5, allowing for easy clinical documentation and treatment follow-up. In settings where full diagnostic interviews can be conducted, the Structured Clinical Interview for DSM-V (SCID) is the gold standard for confirmation of PPD; however, due to its resource intensity, it is not typically used in routine LMIC primary care settings.

6.3 Barriers to Screening in LMICs

There are a number of systemic obstacles to post-partum depression (PPD) screening in low- and middle-income countries (LMICs), including: the stigma around mental health for both patients and providers, suboptimal training for perinatal mental health for primary care and obstetric health workers, a lack of referral pathways after a positive screen, sociocultural norms that frame distressing emotional experiences as personal and/or spiritual and not medical; and the structural prioritisation of physical obstetric outcomes over mental health outcomes in antenatal care platforms. To overcome these barriers requires strengthening the health system, creating community awareness and integrating mental health screening into standardised protocols for routine antenatal and postnatal visits as recommended by the mhGAP intervention guide from the WHO which supports LMIC health systems.

7. INTERVENTIONS: EVIDENCE AND SCALABILITY IN LMICS

Table 3. Evidence Summary for PPD Interventions in LMIC Settings

Intervention	Type	Evidence Level
WHO Thinking Healthy Programme (THP)	Task-shifted CBT	Strong (RCT, Pakist
Group Interpersonal Therapy (g-IPT)	Group psychotherapy	Strong (RCT, Kenya/Lebanon)
Mothers and Babies Course (MBC)	CBT-based group	Moderate-Strong (RCT)
SSRIs (sertraline, fluoxetine)	Pharmacological	Strong (HICs); limi LMIC RCTs
Peer support programmes	Lay health worker	Moderate (observational)
Digital / mHealth CBT	Technology-assisted	Emerging (RCT,

Sources: Rahman et al. Nature Medicine 2025; Trials (g-IPT, Kenya/Lebanon) 2024; Patel et al. Lancet 2022; Kang et al. Campbell Systematic Reviews 2024; Vilarim et al. Braz J Psychiatry 2024; Campbell Systematic Reviews 2024.

7.1 The WHO Thinking Healthy Programme (THP)

The THP (Thinking Healthy Programme) developed by WHO represents the most widely studied and internationally disseminated task-shared psychological intervention for perinatal depression in LMICs (Low and Middle income Countries). The adaptation of this programme involves the use of adapted cognitive behavioural therapy (CBT) principles being delivered by non-specialist community health workers (CHWs) with minimal training and supervision. An important study published in Nature Medicine (2025) was a comparison of THP delivered via technology-assisted peer support (THP-TAP) as opposed to CHW delivered standard THP and involved 980 women across 70 village clusters in rural Rawalpindi, Pakistan. The results demonstrated that THP-TAP was non-inferior to the standard THP in sustaining remission from perinatal depression at 6 months and thus confirms that technology and peer support can facilitate the delivery of CBT on a larger scale without a reduction in effectiveness therefore, as such, is an important result for resource-poor settings with chronic CHW shortages.

A review and analysis of studies from LMICs showed that there were 11 trials total in which the use of task-sharing psychological support for patients with depression were effective and significantly reduced symptoms of depression, and the reduction of symptoms was maintained until 6-12 months after the treatment. When looking at the mediation, moderation and predicting effective and ineffective THPs in LMICs, there were two significant findings in a review article from 2024 published in Psychological Medicine (Subba et al.). Activation of a patient in Pakistan served as a significant mediator to response to psychotherapy and social support in both India and Pakistan was also a significant mediator - indicating the importance of interpersonal connection when providing therapy in LMICs.

7.2 Group Interpersonal Therapy (g-IPT)

According to the WHO, Interpersonal psychotherapy (IPT) is a valid approach for treating depression as it has strong supporting research for its use with post-partum depression (PPD) in high income countries (HIC). There is also an increasing number of studies that support IPT in millions of people living in low-income countries (LMIC). The first of these studies is a random sample superiority trial of group IPT (g- IPT) for treating PPD conducted by [What about specific date information related:] Lebanon and Kenya (Trials; 2024). Women were recruited from antenatal healthcare services and compared against standard care for the effectiveness of g-IPT. This study is one of the few g-IPT studies available in LMIC and has the strongest quality of methodological rigor.

Overall, evidence from a growing number of studies using the g -IPT model shows it is effective, feasible, and has good acceptability, particularly in relation to transitions into becoming new parents or in cases where people experience conflict with one another, especially for people who are becoming new mothers and who typically live in resource-depleted, multi-generational households. A Campbell Systematic Review (Kang et al., 2024) comparing IPT with other psychotherapeutic and pharmacological treatments for PPD in LMICs found comparable efficacy for IPT across these options, with the added advantage of not requiring pharmacological access or management — which are both critical factors for services offered in settings with limited access to medications and medication prescribers.

7.3 Culturally Adapted CBT and Community-Based Models

Originally developing the Mothers and Babies Course (MBC), a

women, in the United States to culturally adapt it for use in & in accordance with the Framework for Reporting Adaptations and Modifications-Enhanced (FRAME) (2023, publication of PMC). Some of these adaptations included incorporating idioms of distress into cultural context of multigenerational households using long-term/short-term household/household and simplifying materials allowing low literacy levels among participants, etc... Evidence of culturally appropriate, tailored (tactile) using the acceptability of (cognitive behaviour therapy) to have sustained participation at >92% at multiple study sites & all included sites across ignore Sierra Leone and East Africa.

Models utilizing community-based methods that include shared tasks have been shown consistently to be cost-effective in LMICs. The scoping review of prevention programs for Postpartum Depression (PPD) (Frontiers in Global Women's Health, 2025) demonstrated that psychoeducation (18 studies) provided by community health workers, home-visiting programs (6), and cognitive-behavioral therapy (6) were the most frequently used and demonstrated effectiveness. In addition, when interventions involved the mother's partner or family along with the index mother, they were more effective than interventions that were solely reliant on professional support (used primarily in cultures that derive their social support structure chiefly from the family rather than the individual professional relationship).

7.4 Pharmacological Treatment

Standard treatments with selective serotonin reuptake inhibitors (SSRIs), including sertraline and fluoxetine, are considered the first course of action for treating moderate to severe postpartum depression (PPD). There is clear evidence of efficacy from high-income countries (HICs), where studies have shown that treated women experience improvements with SSRIs and that the safety of SSRIs while breastfeeding is well within expected boundaries with usual dosages. However, HIC-based studies are not easily generalized to low- and middle -income countries (LMICs) for several reasons: limited availability of medications; reliance on tenuous and fragmented distribution channels; shortages of trained prescribers; the stigma that accompanies taking psychiatric medications; and cultural inaccessibility of pharmacotherapy in areas of the world that characterize emotional distress in non-biomedical terms. In August 2023, the FDA approved zuranolone as the first oral medication specifically approved for PPD; its potential significance related to global health equity is limited at this time but is pivotal for future translation to LMICs.

7.5 Digital Health and mHealth Approaches

Digital health technologies could be an opportunity to provide a new way to deliver perinatal mental health (PMH) interventions among low- and middle-income countries (LMICs) where mobile phone usage is increasing but the number of professionals trained in delivering evidence-based interventions to individuals with PMH is non-existent. The THP-TAP trial (Nature Medicine, 2025) provides evidence that using an app to facilitate delivery of CBT among adults with PMH is not inferior to use of CBTe for their treatment, thus creating a pathway to scaling digital task sharing for this population. However, mHealth interventions for PMH within LMICs have implementation obstacles to face such as the range of smartphone and Internet accessibility to people in more rural areas, digital literacy issues; data privacy concerns; and, need for continuing technical assistance. Nevertheless, there is a strong evidence base trending in the right direction and mHealth-supported task sharing models are a key area in today's landscape of implementation research funding.

8. POLICY FRAMEWORKS AND GAPS

8.1 Global and National Policy Architecture

Increasingly, global health frameworks have focused on Intervention Guide, the WHO provides evidence-based guidance to non-specialists for managing depression (including PPD) in primary care settings within low- and middle-income countries (LMICs). The WHO-UNFPA Joint Programme on Mental Health and Psychosocial Support in Humanitarian Settings specifically addresses PPD among mothers in LMICs affected by conflict. In 2022, an international group of experts known as the Lancet - World Psychiatric Association Commission on Depression called for increased global investment in depression care of 50%, with LMICs expected to be the major benefactors from this increase. However, the implementation of these frameworks at a national level in LMICs is incredibly uneven; less than one in five LMICs has a maternal mental health policy, and most do not have standardized PPD screening protocols implemented routinely as part of antenatal care.

8.2 Treatment Gap and Workforce Shortages

The biggest obstacle to accessing PPD treatment in LMICs is that there isn't enough qualified mental health professionals available. The number of mental health service providers in LMICs averages one psychiatrist and one psychologist for 100,000 people whereas HICs average between six to eighteen psychiatrists and between fifteen and fifty psychologists per 100,000 people. Because there is a one hundred-fold difference between the numbers of providers in LMICs and HICs, providing PPD treatment through specialists is impossible for the majority of people who live in LMICs. In order to adequately address the need for PPD treatment in LMICs, a major shift away from the traditional models of mental health services will need to occur; specifically community-based, task sharing, and integrated perinatal care models will need to be implemented in place of specialist-centered and facility-based model of service delivery. Under the community-based, task sharing, and integrated perinatal care model, trained midwives, community health workers, and peer supporters will conduct identification, treatment, and follow-up for PPD with supervision and guidance provided by a team of mental health specialists who remain in a separate location.

8.3 SDG Alignment and WHO 2030 Targets

Sustainable Development Goal (SDG) 3 (Good Health and Well-Being) is directly related to addressing postpartum depression (PPD) in low- and middle-income countries (LMICs). SDG Target 3.4 (reducing premature death from non-communicable diseases, such as mental disorders) and Target 3.7 (ensuring universal access to sexual and reproductive health) support this initiative. Additionally, SDG 5 (Gender Equality) is an overarching concept throughout all of these targets. The WHO Global Action Plan for Mental Health 2013-2030 calls for a 20% increase in the number of people receiving services for severe mental disorders by 2030. If we are to translate this into specific actions for PPD, we will need dedicated national implementation plans and financing mechanisms. It is essential that we develop both clinical services and complementary upstream structural interventions to reduce the treatment gap for PPD, which include addressing the structural determinants of PPD risk and are gender-based violence, food insecurity, reproductive rights, and women's economic empowerment.

9. DISCUSSION

This review synthesizes a substantial and rapidly growing body of evidence that establishes PPD as a major, underaddressed public health burden in LMICs, affecting approximately one in four postpartum women — a figure consistent across multiple high-quality recent systematic reviews and meta-analyses including the landmark JAMA Psychiatry 2023 meta-analysis of 616,708 women. The scale of this burden, combined with the well-documented consequences for maternal health, infant development, and intergenerational wellbeing, makes a compelling case for urgent, coordinated, evidence-based action

The risk factor evidence highlights an important distinction between non-modifiable risk factors (prior depression history, HIV status, obstetric complications) and highly modifiable structural factors (IPV, poverty, lack of social support, unintended pregnancy) that are amenable to upstream policy intervention. The dominance of IPV as the leading modifiable risk factor for PPD across LMIC regions calls for the systematic integration of IPV screening and response into all perinatal care platforms — not as an optional add-on but as a structural feature of universal antenatal and postnatal care. The scoping review evidence from 13 LMICs (BMC Pregnancy and Childbirth, 2022) specifically demonstrates that social support interventions reduce IPV risk and buffer the mental health consequences of IPV exposure, providing a practical entry point for community-based programming.

The intervention evidence base has strengthened considerably since 2020. The Nature Medicine 2025 RCT of technology-assisted peer-delivered THP represents a step-change in the evidence for scalable PPD treatment in LMICs, demonstrating that effective CBT can be delivered at scale through peers and digital platforms without specialist involvement. The ongoing trials of group-IPT in Kenya and Lebanon (Trials, 2024) promise to further expand the evidence base for WHO-endorsed psychological treatments in LMIC contexts. Together, these developments suggest that the field is transitioning from proof-of-concept to implementation at scale — a transition that requires parallel investment in health system strengthening, national screening protocols, and workforce training.

A critical limitation of the current evidence base is geographic and methodological heterogeneity. Prevalence estimates vary enormously across studies due to differences in screening instruments, cut-off values, timing of assessment, and sampling frames, making precise regional or country-level estimates difficult to synthesize. The underrepresentation of Francophone Africa, the Pacific Islands, and fragile/conflict-affected states in high-quality PPD research represents a significant gap that must be addressed. Future research priorities include: (1) large, nationally representative epidemiological studies using standardized, validated instruments with BRINDA-style adjustment for context; (2) longitudinal studies tracing PPD from antenatal onset through the first two years postpartum in LMIC cohorts; (3) RCTs of digital/mHealth augmented interventions in Sub-Saharan Africa and Southeast Asia; (4) implementation science studies examining the fidelity, reach, and equity of task-shared PPD interventions at health system scale; and (5) cost-effectiveness analyses integrating both short-term clinical outcomes and long-term developmental and economic returns.

10. CONCLUSIONS

Postpartum depression in low- and middle-income countries constitutes a critical, largely invisible public health emergency that demands urgent, multi-level, evidence-based action. With one in four postpartum women in LMICs affected, and the majority receiving no care whatsoever, PPD represents both a profound equity failure and a major obstacle to the achievement of sustainable development goals in women's health, child development, and global mental health.

The evidence reviewed supports a clear roadmap for action: (1) universal implementation of EPDS screening, administered twice perinatally, within integrated antenatal and postnatal care platforms; (2) systematic training of midwives, CHWs, and primary care providers in PPD detection, brief psychoeducation, and referral pathways using the WHO mhGAP framework; (3) national scale-up of the WHO Thinking Healthy Programme and group-IPT as the evidence-supported task-shifted psychological treatments of first choice in LMIC settings; (4) integration of IPV screening and response into all perinatal care contacts; (5) investment in digital and mHealth-replacement for, human therapeutic relationships; (6) development and financing of dedicated national maternal mental health policies with monitoring frameworks aligned to SDG 3 and WHO 2030 targets; and (7) sustained investment in epidemiological research infrastructure to close the surveillance gaps that continue to obstruct precise burden estimation and resource allocation.

The first year of a woman's child's life is simultaneously the period of greatest risk for PPD and the period of greatest opportunity for its detection and treatment. Failing to seize this window perpetuates a cycle of maternal suffering, impaired infant development, and human capital loss that no LMIC can afford. The political will, clinical evidence, and technological tools to make meaningful progress now exist — what is needed is sustained, coordinated global commitment to deploy them equitably.

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