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Analysing Mental Health Problems among Pregnant Women: A Literature Review

Masalah Kesehatan Mental pada Ibu Hamil: Sebuah Tinjauan Literatur

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Abstract
This study aims to investigate evidence on perinatal mental health problems in low-middle income countries (LMICs). Pregnancy that changes women's physical condition may give unexpected mental health burden to women during and after the pregnancy. While prevalence of perinatal mental health problems higher in LMICs than developed countries, exploration of this issue in LMICSs is still limited. Using narrative literature review, this study provides critical analysis on existing literature about perinatal mental health problems. Findings shows the prevalence of perinatal mental health problems in LMICs is quite high with complex risk factors. Risk factors for pregnant women experiencing mental health problems can come from individuals, families, and communities, including biological and social factors. Social factors determine perinatal mental health problems often related to gender. Therefore, this study proposes gender analysis of perinatal mental problems in LMICs and how gender transformative approach can contribute to promote health of mothers, fathers, and children during the perinatal period.

Keywords
Gender; LMICs; Mental Health Problem; Perinatal

Abstrak
Tulisan ini bertujuan untuk menganalisis literatur terkait masalah kesehatan mental saat kehamilan dan setelah kelahiran di negara berkembang. Kehamilan memberikan perubahan besar pada kehidupan perempuan yang dapat memengaruhi kesehatan mentalnya. Prevalensi masalah kesehatan mental selama kehamilan dan sesudah kelahiran cenderung tinggi di negara berkembang dibandingkan dengan negara maju. Namun demikian, penelitian terkait isu ini cenderung terbatas di negara berkembang. Studi ini menggunakan narrative literature review, yang memberikan analisis kritis terhadap literatur yang ada terkait permasalahan kesehatan mental selama kehamilan dan sesudah kelahiran. Penelitian ini menemukan bahwa kejadian gangguan mental pada ibu hamil cukup tinggi di negara berkembang dengan faktor risiko yang cukup kompleks. Faktor risiko ibu hamil mengalami gangguan kesehatan mental dapat berasal dari individu, keluarga, dan komunitas dengan faktor berupa faktor biologis dan sosial. Faktor sosial yang mendorong terjadinya gangguan kesehatan mental selama kehamilan seringnya berkaitan dengan gender. Oleh karena itu, tulisan ini juga menyajikan analisis gender dalam memahami isu tersebut dan mengusulkan pengarusutamaan gender dalam strategi penanggulangan masalah kesehatan mental selama masa kehamilan dan sesudah kelahiran.

Kata Kunci
Gender; Kehamilan; Kesehatan Mental; Negara Berkembang

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1. Introduction

The physical and mental health of women may change dramatically and unexpectedly during pregnancy and after delivery, increasing the probability of them experiencing mental health problems during this period (Nurbaeti et al., 2019; Tefera et al., 2015). It is often referred to as a perinatal mental health issue, which is the period from conception until the end of the first postpartum year (Tefera et al., 2015). During pregnancy and after delivery, some mental health problems, including anxiety and depression symptoms, may arise due to complex causes, including biological, psychological, and socio-environmental factors (Buoli et al., 2013; Tefera et al., 2015). While biological causes include reproductive hormonal changes during and after pregnancy, psychological factors of perinatal mental health issues include a history of mental problems and low self-esteem, and socio-environmental causes include financial difficulties, poor marital relationships, and stressful life events (O'Hara & Wisner, 2014).

Mental health problems during and after delivery may occur through several common symptoms. Pregnant women who feel depressed may experience social function deterioration, emotional withdrawal, and excessive fear of pregnancy and of their abilities to be parents (Bowen & Muhajarine, 2006; Geller, 2004). Symptoms of mental health problems may not occur during pregnancy, but it usually first manifest during pregnancy and may progress to postpartum depression and postpartum psychosis (Bowen & Muhajarine, 2006). These symptoms may include severe grieving, weight changes, poor focus and memory, sleep disturbances, fatigue, and suicidal thoughts (Andajani-Sutjahjo et al., 2007; Bowen & Muhajarine, 2006; Nurbaeti et al., 2019).

Perinatal mental health problems may result in several negative effects that can directly or indirectly affect the fetus and mother. Perinatal mental health issues may negatively affect mothers' activities, affect their growth, and increase the risk of maternal and child mortality and morbidity (Nurbaeti et al., 2019; Tefera et al., 2015; Widiasih et al., 2021). Mothers' unhealthy behaviors resulting from perinatal mental health problems may cause chemical and hormonal disturbances in the fetus. The immediate effects of chemical and hormonal changes in infants include preterm birth, low birth weight, intrauterine growth retardation, malnutrition, and impaired infant growth (Bowen & Muhajarine, 2006; Dadi et al., 2022). However, poor maternal behaviours resulting from perinatal mental health issues include infant ill-treatment, discontinuing breastfeeding earlier, infant irritability, and poor infant care (Bowen & Muhajarine, 2006; Dadi et al., 2022; Eastwood et al., 2017). Despite the serious consequences of perinatal mental health issues, they often receive little attention because of the focus on maternal and infant physical health and the attribution of symptoms to the physiological and hormonal changes caused by pregnancy (Bowen & Muhajarine, 2006).

Mental health issues during pregnancy and childbirth are also gendered. Society often places the responsibility to nurture the child, even from pregnancy and after delivery, solely on women. Most studies target mothers to explore this phenomenon, although a small number of studies have acknowledged that fathers may also experience mental health problems during their wives' pregnancies and after delivery. Baldoni and Giannotti (2020) explained that fathers begin to actively engage in childcare and family life during and after pregnancy. While fathers and mothers share the responsibility of nurturing children, their emotions also influence each other, increasing the chances of fathers experiencing mental health problems. Gender has also been reported in other studies. Raghavan et al. (2022) mentioned that in low-middle-income countries (LMICs), some risk factors for poor mental health during and after pregnancy are related to gender inequities.

Perinatal mental health problems are common in high-, middle-, and low-income countries, but they remain underexplored in LMICs (Gelaye et al., 2016). The rates of perinatal mental health issues in LMICs range from 9 to 65%, which is much higher than that in high-income countries where the prevalence is below 20% (Gelaye et al., 2016; Raghavan et al., 2022; Tefera et al., 2015). Despite the significant burden of perinatal mental health problems in LMICs, studies examining their causes and impacts are rare and may not be as thorough as those conducted in high-income countries (Fisher et al., 2012; Gelaye et al., 2016). Conducting study that analyse perinatal mental health problems in

LMICs may be crucial to provide evidence that will assist stakeholders in developing interventions that are efficient and effective in addressing this issue.

Using the gender analysis framework developed by the WHO (2011), this study aimed to analyze perinatal mental health problems in LMICs. The framework is suitable to analyse perinatal mental health issues in LMICs as it considers perinatal mental health in both health and social aspect. Evidence result from this study will provide insights on how to mainstreaming gender in health programs to tackle the perinatal mental health issue that is quite closed with gender issue.

2. Methods

This study used a narrative literature review, a method of collecting and analyzing scholarly writings, to investigate evidence of perinatal mental health problems in LMICs. Literature on the issue was collected using Google Scholar, a platform that can be used to conduct reviews of peer-reviewed journals, books, conference proceedings, and dissertations available in English or Indonesian. The research was initiated using keywords and combinations such as “perinatal” or “prenatal” or “postnatal” or “postpartum” and "mental health" or “depression” or “anxiety” and “low-middle income countries.”

The criteria for the literature to be included were primary research or reviews on perinatal mental health problems in LMICS that are available in English. Literature that will be excluded in this paper includes research protocols and any literature that does not mainly focus on perinatal mental health problems in LMICs. The inclusion criteria did not include the year or country in which the study was completed. The author searched the related literature in October 2022 and then selected the studies by reading the titles and analyzing the abstracts or summaries.

A narrative literature review enables the author to discover concepts, connect ideas, and tell stories by reading and evaluating literature (Baker, 2016). According to Machi (2016), the literature review includes collecting and reading relevant literature, providing an overview of significant literature, and highlighting key concepts from each piece of literature. The concept or idea from the selected literature will then be described and summarized. Moreover, it is connected by comparing and contrasting concepts and ideas. Information about perinatal mental health problems in LMICs in the literature will also be analyzed and critically evaluated to address the research objectives. Concept or ideas about perinatal mental health problems in LMICs that arise in the collected literature are related to risk factors, barriers to addressing the issue, sex analysis, and strategies to tackle perinatal mental health issues in LMICs. Therefore, the results and discussion section of this review is divided into several themes that arise in the selected literature.

3. Results and Discussion

Twenty selected articles were associated with perinatal mental health problems in LMICs. The selected literature varied from peer-reviewed journal articles to reports. Various peer-reviewed journals were used in this study, including research reports, editorials, reviews, and opinions. The selected literature included various mental health problems (depression, anxiety, etc.) in different periods, during pregnancy (antenatal/prenatal/antepartum), after delivery (postpartum), or both.

This study was based on publications published between 1991 and 2022. There were 11 research papers, three systematic reviews, four reviews (including a policymaker review and a scoping review), and two opinions. These articles were produced by organizations such as the World Health Organization (WHO) and researchers interested in the subject. The theme emerged in the selected articles, which included symptoms, causes, risk factors, the significance of those factors, the impact of mental health problems on mothers and foetuss/babies, prevalence and proportions, medical intervention, healthcare-seeking behaviors, gender analysis on the issue, barriers to addressing the issue, and strategies to address the issue. The details of the selected literature are presented in Table 1, and the elaboration of the themes arising in the articles will be explained later.

3.1. Determinant of Perinatal Mental Health Issues in LMICs

To address perinatal mental health issues in LMICs, it is important to understand their risk factors. Risk factors refer to anything that increases the chance of developing perinatal mental health problems, based on findings

Table 1. Literature Review of Perinatal Mental Health Problems

No	Author (Date)	Title	Type of Literature	Themes arise
1	Angela Bowen and Nazeem Muhajarine (2006)	Antenatal Depression	Editorial	– Symptoms of antenatal depression – Risk factors – Impact on mother and foetus – Medical intervention
2	Atif Rahman, et. al. (2013)	Grand Challenges: Integrating Maternal Mental Health into Maternal and Child Health Programmes	Review (Evidence for Policy)	– Prevalence of maternal depression – Risk factors – Barriers to address perinatal mental health problem (misconception about maternal mental health) – Strategy to tackle perinatal mental health problem
3	Azniah Syam, et. al. (2020)	Identifying Risk Factors of Prenatal Depression among Mothers in Indonesia	Research article	– Prevalence of prenatal depression – Risk factors
4	Bizu Gelaye, et. al. (2016)	Epidemiology of Maternal Depression, Risk Factors, and Child Outcomes in Low-Income and Middle-Income Countries	Systematic review	– Prevalence of perinatal depression (both prenatal and postpartum) – Risk factors – Impact on infant health
5	Dadong Wu, Lei Jiang, and Guanglin Zhao (2022)	Additional Evidence on Prevalence and Predictors of Postpartum Depression in China: A Study of 300,000 Puerperal Women Covered by a Community-Based Routine Screening Programme	Research article	– Prevalence of postpartum depression – Predictors (risk factor) of postpartum depression
6	Dan Wang, et. al. (2021)	Factors Influencing Paternal Postpartum Depression: A Systematic Review and Meta-Analysis	Systematic review	– Risk factors of paternal postpartum depression – Significancy of those factors (using meta-analysis)
7	Franco Baldoni and Michele Giannotti (2020)	Perinatal Distress in Fathers: Toward a Gender-Based Screening of Paternal Perinatal Depressive and Affective Disorders	Opinion article	– Gender perspective on paternal perinatal mental health problems – Symptoms of each mental health problems
8	Joan S. Girgus and Kaite Yang (2015)	Gender and Depression	Review article	– Gender differences in depression' vulnerabilities – Gender differences in depression' stressors
9	Judith Richman, Valerie Raskin, and Cheryl Gaines (1991)	Gender Roles, Social Support, and Postpartum Depressive Symptomatology	Research article	– Gender differences in prevalence of postpartum depressive symptomatology – Social support
10	Kai Yang, Jing Wu, and Xiangdong Chen (2022)	Risk Factors of Perinatal Depression in Women: A Systematic Review and Meta-Analysis	Systematic review	– Risk factors of perinatal depression

No	Author (Date)	Title	Type of Literature	Themes arise
11	Angela Bowen and Nazeem Muhajarine (2006)	Prevalence and Associated Factors of Postpartum Depression among Postpartum Mothers in Central Region, Eritrea: A Health Facility Based Survey	Research article	– Prevalence of postpartum depression – Risk factors
12	Pamela A. Geller (2004)	Pregnancy as a Stressful Life Event	Review article	– "Events" around pregnancy – Medical issues – Mental health during pregnancy
13	Sari Andajani-Sutjahjo, Lenore Manderson, and Jill Astbury (2007)	Complex Emotions, Complex Problems: Understanding the Experiences of Perinatal Depression among New Mothers in Urban Indonesia	Research article	– Proportion of mother with postpartum depression – Women's feeling during and after pregnancy – Cause to the negative feeling
14	Telake Azale, Abebaw Fekadu, and Charlotte Hanlon (2016)	Treatment Gap and Help-Seeking for Postpartum Depression in a Rural African Setting	Research article	– Healthcare seeking behaviour of women with postpartum depression – Factors of help-seeking behaviour
15	Vicenta Escribà-Agüir and Lucía Artazcoz	Gender Differences in Postpartum Depression: A Longitudinal Cohort Study	Research article	– Number of depressions during pregnancy – Risk factors
16	WHO (2008)	Maternal Mental Health And Child Health And Development In Low And Middle Income Countries	Report	– Prevalence of maternal mental health problems – Risk factors – Consequences to women
17	Ying Liu, et.al. (2021)	Postpartum Depression and Postpartum Post-Traumatic Stress Disorder: Prevalence and Associated Factors	Research article	– Prevalence of postpartum depression and PTSD – Risk factors
18	Archana Raghavan, et. al. (2022)	Gender Transformative Interventions for Perinatal Mental Health in Low and Middle Income Countries—A Scoping Review	Scoping review	– Existing gender transformative interventions – Analysis of male engagement – Common components of gender transformative in interventions
19	Masoumeh Dejman, et. al. (2008)	Explanatory Model of Help-Seeking and Coping Mechanisms among Depressed Women in Three Ethnic Groups of Fars, Kurdish, and Turkish in Iran	Research article	– Help-seeking behaviour among depressed women (treatment, medication, hospitalization) – Strategies of coping mechanisms among depressed women
20	Tomas Benti Tefera, et. al. (2015)	Perinatal Depression and Associated Factors among Reproductive Aged Group Women at Goba and Robe Town of Bale Zone, Oromia Region, South East Ethiopia	Research article	– Prevalence of perinatal depression – Risk factors

from previous studies. The risk factors for perinatal mental health problems in LMICs are relatively similar to those in high-income countries, but they may be more prevalent among people living in LMICs (Geller, 2004). However, women living in LMICs may be at a greater

Table 2. Gender analysis of the perinatal mental health issues in LMICs

Health-related considerations	Gender related considerations		
	Biological factors	*Sociocultural factors*	*Access to and control over resources*
Risk factors and vulnerability	– Hormonal changes during pregnancy – Unplanned and unintended pregnancy – Having many children	– Lack of social support – Women with depressed mothers – IPV, domestic violence, and GBV are usually experienced by women. – Mothers, as the caregiver, provide for the baby's needs and do domestic chores. – Male infant preference in some cultures	– Low of autonomy and decision-making power – Lack of control over resources among women – There is a lack of autonomy on contraception use, but burden of using contraception is often put on women.
Access to and use of health services	– Untreated depression during pregnancy leads to postpartum depression. – Higher pregnancy depression incidence rate among women than men	– Society commonly believes pregnancy and childbirth bring only joy. – In most countries, maternal leave is more common than paternal leave, limiting healthcare seeking behaviour among men	Lack of knowledge and awareness about mental health during pregnancy and postpartum
Health-seeking behaviour	Women often underestimate their depressive symptoms as normal manifestations occur during the perinatal period.	– Expectation of the mother to feel happy during pregnancy and after delivery, and of the father to be responsible for the childcare and family life. – Masculinity norms impact males' expression of depression; they tend not to display emotional suffering through typical depressive-like responses.	– Women tend to seek out family and friends' support to cope with difficulties during pregnancy and after delivery. – Men are often emotionally dependent on their spouses.
Treatment options	Pregnant women have better access to the antenatal care that can refer them to mental health services	Father's depressive symptoms are often underestimated by clinicians as normal manifestations occurring during the perinatal period.	Healthcare providers prioritise maternal mortality and morbidity resulting from obstetric complications over maternal mental health.
Experiences in health care settings	Women have more chores and tend not to want to spend much time in healthcare	Healthcare providers may focus more on mothers' physical condition than their mental health condition, due to the limited time	Lack of focus on fathers for the prevention and screening of perinatal mental health disorders
Health and social outcomes	– Preeclampsia and preterm delivery – Higher perinatal depression incidence among women than men	Maternal and paternal perinatal depression are influencing each other	Paternal perinatal depression often goes untreated and undiagnosed because men have limited access to healthcare during pregnancy and the postpartum period

risk of perinatal mental health problems due to individual, family, and community factors.

According to previous studies, individual risk factors include biological, psychological, and behavioral aspects (Bowen & Muhajarine, 2006; Gebregziabher et al., 2020; Yang et al., 2022; Wang et al., 2021). Biological aspects include hormonal changes and hereditary factors, particularly during the postpartum (O'Hara & Wisner, 2014). According to O'Hara and Wisner (2014), women experience hormonal changes after delivery, with reproductive hormones that are only produced during pregnancy. Withdrawal from this hormone may affect women's mood, making them more sensitive and struggling to maintain their mood. Furthermore, the psychological aspects of perinatal mental health problem risk factors include history of depression, negative life experiences, perceived stress, and pregnancy self-efficacy (Andajani-Sutjahjo et al., 2007; Syam et al., 2020; Wang et al., 2021). While perceived stress refers to feelings or thoughts about how much stress they are under at the moment or over a period of time, self-efficacy is related to individuals' confidence in dealing with problems (Phillips, 2013). During pregnancy and after delivery, both mothers and fathers may experience a continuous sense of stress that may lead to depression and melancholic feelings.

Another risk factor for perinatal mental health problems at the individual level is behavior. It can be current behavior, including alcohol and substance abuse, and past behavior, which includes a history of previous abortions and unplanned pregnancy (Bowen & Muhajarine, 2006). Alcohol and substance misuse are indicated to negatively affect people's brains, lead to more impulsive behavior, and are associated with reccurency of mental health disorders (National Institute of Mental Health, 2021). Mental health problems, on the other hand, also increase the likelihood of alcohol and substantial abuse (National Institute of Mental Health, 2021).

In addition to the individual level, the risk factors for perinatal mental health problems can come from the family level. Studies have found that low socioeconomic status and poor marital and family relationships are risk factors at the family level, whereas risk factors at the community level include a lack of social support (Gebregziabher et al., 2020; Liu et al., 2021; Syam et al., 2020; WHO, 2008; Wu et al., 2022). Low socioeconomic status may lead to financial difficulties that add more stressors to families, including fathers and mothers who expect babies. Moreover, poor marital relationships may also hinder fathers and mothers from sharing their thoughts, feelings, and coping with stressors since their relationships may become the cause of negative experiences. At the social level, the lack of support and understanding of relatives and friends can add more burden to the negative effects of psychological stress (Wang et al., 2021).

Low socioeconomic status among women in LMICs may result from low family income, unemployed husbands, living in underprivileged urban areas, and low educational attainment of both women and their husbands (Andajani-Sutjahjo et al., 2007; Gebregziabher et al., 2020; Syam et al., 2020; Wu et al., 2022). These conditions may cause women to feel worried and insecure about the future, resulting in feelings of depression during pregnancy and after giving birth (Andajani-Sutjahjo et al., 2007). Moreover, women living in poverty often have to share homes with extended families, including parents and relatives, which increases opportunities for conflicts with other family members and raises the risk of perinatal mental health problems (Andajani-Sutjahjo et al., 2007; Wu et al., 2022). The occurrence of perinatal mental health problems is also significantly influenced by low marital satisfaction, which results from a lack of husband support and poor marital relationships and can lead to intimate partner violence (IPV), domestic violence, and abandonment (Andajani-Sutjahjo et al., 2007; Gebregziabher et al., 2020; Syam et al., 2020; Wu et al., 2022). Relationships between couples that already suffer may be exaggerated by childbirth, which puts additional burdens on mothers and fathers and reduces leisure time (Escribà-Agüir & Artazcoz, 2011).

The risk of perinatal mental health problems may also arise from mothers' personal histories, including histories of mental illness and early experiences with violence (Gelaye et al., 2016; Wang et al., 2021; Yang et al., 2022). Gelaye et al. (2016) found that perinatal mental health problems were a long-term effect of the high prevalence of child sexual abuse in LMICs. A

history of sexual abuse during childhood was associated with IPV incidences during pregnancy that led to feelings of loss, separation, and social, emotional, and physical isolation, which resulted in perinatal mental health problems (Gelaye et al., 2016).

3.2. Barriers to Addressing Perinatal Mental Health Problems in LMICs

LMICs tend to have fewer resources than high-income countries, but are still home to more than 80% of the world's population (Gelaye et al., 2016). Resources allocated to tackling perinatal mental health problems in LMICs are quite limited, leading to under-detected and untreated perinatal mental health problems (Patel & Prince, 2010). In LMICs, preventing deaths from obstetric complications is often prioritized over addressing maternal mental health problems (Gelaye et al., 2016). Policymakers may assume that focusing on mental health interventions will distract healthcare workers and weaken other "priority" interventions. On the other hand, studies have found that integrating maternal mental health into maternal and child healthcare (MCH) can achieve synergistic results because of the holistic nature of the mind-body (Rahman et al., 2013).

However, integrating mental health interventions into current maternal and child healthcare may not be sufficient to address this issue, since social norms and community awareness of perinatal mental health issues play significant roles in help-seeking behaviors and access to healthcare. The low levels of help-seeking behaviors among women in LMICs, which may be caused by a lack of awareness of perinatal mental health issues at individual and societal levels, often hinder the identification and treatment of perinatal mental health problems. According to Azale et al. (2016), mothers' help-seeking behaviors and healthcare access are substantially correlated with their perceptions of the causes and effects of perinatal mental health problems and their need for treatment. To start seeking and accessing healthcare, mothers must be aware that their situation requires professional assistance.

Moreover, mothers' treatment decisions are influenced by social norms and cultural practices in the community, and how social and healthcare workers deliver mental health services in the community. Lack of public awareness, social factors, and financial difficulties may contribute to undiagnosed and untreated perinatal mental health problems in LMICs (Azale et al., 2016; Dejman et al., 2008). On the other hand, even though mental health is already included in MCH services, social and healthcare workers in MCH rarely ask about mothers' mental health since pregnancy and having a baby are seen as joyful events in LMICs.

3.3. Gender as Social Determinants of Perinatal Mental Health Issues in LMICs

Women are at risk for mental health problems, particularly during pregnancy and after delivery. While women are diagnosed with depression twice and exhibit depressive symptoms twice as often as men by the middle of adolescence, this condition is exaggerated by pregnancy and childbirth (Girgus & Yang, 2015). There are some speculations on gender differences in the prevalence of depression among women and men, including that women are more willing to express their feelings and seek help than men (Girgus & Yang, 2015). However, studies have found that gender differences are caused by different coping styles and interpersonal orientations related to social norms and the values placed on men and women (Girgus & Yang, 2015).

On the other hand, women's vulnerability to perinatal mental health problems and barriers to healthcare access in LMICs may be influenced by sex. Some studies conducted in LMICs found that sex plays a substantial role in perinatal mental health problems (Gelaye et al., 2016; Raghavan et al., 2022). Using the WHO matrix on gender mainstreaming in health, this study will perform a gender analysis of perinatal mental health problems. By considering gender differences in biological conditions, social factors, and access to resources, the matrix enables us to analyze risk factors and vulnerability, health-seeking behavior, healthcare access, treatment and experience in healthcare settings, and the health outcomes of perinatal mental health problems (WHO, 2011).

Women are biologically vulnerable to feelings of depression during pregnancy and after birth due to hormonal imbalances, blood loss, pain, and lack of sleep (Liu et al., 2021). However, the condition is often exaggerated by traditional gender norms that place the

role of caregivers on women, including caring for infants and other family members (Baldoni & Giannotti, 2020). One study found that women living with depressed mothers tend to develop depression because they are involved in providing comfort to their mothers while suppressing their own unpleasant feelings (Girgus & Yang, 2015). Women are particularly vulnerable to mental health problems during pregnancy and after childbirth because they must deal with unexpected changes in their bodies while still dealing with caregiver roles and domestic chores.

Additionally, owing to the higher total fertility rate in LMICs than in high-income countries, women living in LMICs are more likely to experience several pregnancies and births during their lifetime, making them more vulnerable to perinatal mental health problems (Andajani-Sutjahjo et al., 2007; WHO, 2008). Some cultures in LMICs may prefer male infants, which may increase the country's high fertility rate and the risk of perinatal mental health problems for women. Compared to mothers who give birth to male children, those with young children are often blamed for birth and are more likely to experience depression (Gelaye et al., 2016). However, multiparity or having many children also increases the incidence of postpartum depression in men because it increases their financial and parental responsibility (Wang et al., 2021).

Another risk factor for perinatal mental health problems is unplanned and unintended pregnancies, including pregnancies resulting from rape or improper use of contraception (Gebregziabher et al., 2020). The risk factor is the result of traditional gender norms, which often give more power to men. Women with low levels of education and those living in poverty often have limited autonomy, low decision-making power related to contraception, and a lack of control over resources (Coll et al., 2021). Women are more likely to experience perinatal mental health problems because of gender inequity within patriarchal cultures, which makes it challenging to achieve better health outcomes.

Gender also affects health-seeking behaviors and access to healthcare for mental health problems during pregnancy and after delivery. Barriers to accessing healthcare and receiving professional assistance can come from an individual's knowledge and awareness of perinatal mental health issues, healthcare efforts, and resource allocation to address the issue, or from norms and expectations in society. The general belief in society is that childbirth provides only happiness. However, mothers who have just given birth might also suffer from fear and depression triggered by the experience of pregnancy and giving birth (Andajani-Sutjahjo et al., 2007). Social values may hinder Indonesian women from expressing their negative emotions even to their closest friends and family. Women who are already susceptible to depression may feel confused and guilty as a result of the expectation of being cheerful during pregnancy and after giving birth (Bowen & Muhajarine, 2006; Geller, 2004).

Moreover, fathers are expected to carry financial responsibilities for childcare and family life, which may cause them to feel anxious (Baldoni & Giannotti, 2020). However, the masculinity standard and patriarchal culture prevent them from displaying emotional distress (Baldoni & Giannotti, 2020). Men also often rely only on their partners for emotional support, but women frequently have several support systems, including their friends (Richman et al., 1991).

Both mothers and fathers are vulnerable to perinatal mental health problems of varying degrees and aspects. Because women experience more risk factors than men, greater perinatal mental health problems are often found among women than among men (Baldoni & Giannotti, 2020). Although the incidence of depression among women tends to decline from pregnancy to postpartum, more men experience postpartum depression than prenatal depression (Escribà-Agüir & Artazcoz, 2011). However, there is a significant association between maternal and paternal perinatal depressive symptoms because the emotional states of mothers and fathers influence each other during the perinatal period (Baldoni & Giannotti, 2020). Rather than comparing burden across genders, this study highlights the need to address traditional gender norms that make both mothers and fathers vulnerable to perinatal mental health problems.

3.4. Using Gender Transformative Approaches to Address Perinatal Mental Health Issues in LMICs

Sex-related factors seem to have a significant impact on perinatal mental health problems in LMICs. The

literature suggests that addressing gender disparities in perinatal health programs and policies may be an active agent of change to address risk factors and barriers to healthcare access (Coll et al., 2021). Gender inequalities in perinatal mental health problems may have been identified through some interventions (Raghavan et al., 2022). However, interventions seldom attempt to decrease existing inequalities or even give people the chance to actively challenge gender stereotypes. Applying gender transformative approaches enables interventions to address power disparities between genders, close gender gaps, and involve men and other family members to improve overall community health.

There are opportunities to utilize gender-transformative approaches to address perinatal mental health problems in LMICs. Available evidence indicates that gender plays a significant role in this issue. Although mothers and fathers may be vulnerable to mental health problems during pregnancy and after childbirth, healthy marital relationships and good communication between partners may help balance decision-making power in the family and access to required resources (Raghavan et al., 2022). Moreover, both male and other family members must be involved in providing emotionally supportive environments for pregnant women and mothers following birth (Bowen & Muhajarine, 2006). Improving men's attitudes about gender and increasing men's practical support for women's health while avoiding creating more power imbalance between genders. Lastly, increasing awareness of partner violence and mental health issues during pregnancy and the postpartum period among women and men, as well as in the community, may reduce the risk factors for perinatal mental health problems and facilitate women and men accessing essential healthcare.

4. Conclusion

Perinatal mental health problems are quite prevalent in LMICs, with opportunities to thoroughly explore issues to address them effectively. This study found that the risk factors for perinatal mental health problems are often complex and multilevel. It includes the individual, family, and societal levels. Risk factors for perinatal mental health problems in LMICs at the individual level consist of biological, psychological, and behavioral aspects. Moreover, risk factors at various levels are related to each other, increasing the chances of individuals experiencing mental health problems during pregnancy and after delivery. Although perinatal mental health problems can occur in both fathers and mothers, they are mostly experienced by the mothers. According to this study's analysis, gender contributes significantly to placing women in vulnerable conditions, restricting their access to healthcare, and leading to poorer health outcomes during and after pregnancy. Based on this analysis, gender transformative approaches can be applied to the interventions of perinatal mental health problems in LMICs to address this issue. It includes challenging traditional gender and harmful masculinity norms, addressing power imbalances between the two genders, and involving men and other family members to promote better health outcomes for mothers, fathers, and children during and after pregnancy.

References

Andajani-Sutjahjo, S., Manderson, L., & Astbury, J. (2007). Complex emotions, complex problems: Understanding the experiences of perinatal depression among new mothers in urban Indonesia. *Culture, Medicine and Psychiatry, 31*(1), 101–122. Crossref | Google Scholar

Azale, T., Fekadu, A., & Hanlon, C. (2016). Treatment gap and help-seeking for postpartum depression in a rural African setting. *BMC Psychiatry, 16*(1), 1–10. Crossref | Google Scholar

Baker, J. D. (2016). The Purpose, Process, and Methods of Writing a Literature Review. *AORN Journal, 103*(3), 265–269. Crossref | Google Scholar

Baldoni, F., & Giannotti, M. (2020). Perinatal Distress in Fathers: Toward a Gender-Based Screening of Paternal Perinatal Depressive and Affective Disorders. *Frontiers in Psychology, 11*(August), 1–5. Crossref | Google Scholar

Bowen, A., & Muhajarine, N. (2006). Antenatal depression. *Canadian Nurse, 102*(9), 27–30. Crossref | Google Scholar

Buoli, M., Caldiroli, A., & Altamura, A. C. (2013). Psychotic versus non-psychotic major depressive disorder: A comparative naturalistic study. *Asian Journal of Psychiatry, 6*(4), 333–337. Crossref | Google Scholar

Coll, C. V. N., Santos, T. M., Devries, K., Knaul, F., Bustreo, F., Gatuguta, A., Houvessou, G. M., & Barros, A. J. D. (2021). Identifying the women most vulnerable to intimate partner violence: A decision tree analysis from 48 low and middle-income countries. *EClinicalMedicine, 42*, 101214. Crossref | Google Scholar

Dadi, A. F., Akalu, T. Y., Wolde, H. F., & Baraki, A. G. (2022). Effect of perinatal depression on birth and infant health outcomes: a systematic review and meta-analysis of observational studies from Africa. *Archives of Public Health, 80*(1), 1–11. Crossref | Google Scholar

Dejman, M., Ekblad, S., Forouzan, A. S., Baradaran-Eftekhari, M., & Malekafzali, H. (2008). Explanatory model of help-seeking and coping mechanisms among depressed women in three ethnic groups of Fars, Kurdish, and Turkish in Iran. *Archives of Iranian Medicine, 11*(4), 397–406. Google Scholar

Eastwood, J., Ogbo, F. A., Hendry, A., Noble, J., & Page, A. (2017). The impact of antenatal depression on perinatal outcomes in Australian women. *PLoS ONE, 12*(1), 1–16. Crossref | Google Scholar

Escribà-Agüir, V., & Artazcoz, L. (2011). Gender differences in postpartum depression: A longitudinal cohort study. *Journal of Epidemiology and Community Health, 65*(4), 320–326. Crossref | Google Scholar

Fisher, J., de Mello, M. C., Patel, V., Rahman, A., Tran, T., Holton, S., & Holmesf, W. (2012). Prevalence and determinants of common perinatal mental disorders in women in low-and lower-middle-income countries: A systematic review. *Bulletin of the World Health Organization, 90*(2), 139–149. Crossref | Google Scholar

Gebregziabher, N. K., Netsereab, T. B., Fessaha, Y. G., Alaza, F. A., Ghebrehiwet, N. K., & Sium, A. H. (2020). Prevalence and associated factors of postpartum depression among postpartum mothers in central region, Eritrea: a health facility based survey. *BMC Public Health, 20*(1), 1–10. Crossref | Google Scholar

Gelaye, B., Rondon, M. B., Araya, R., & Williams, M. A. (2016). Epidemiology of maternal depression, risk factors, and child outcomes in low-income and middle-income countries. *The Lancet Psychiatry, 3*(10), 973–982. Crossref | Google Scholar

Geller, P. A. (2004). Pregnancy as a stressful life event. *CNS Spectrums, 9*(3), 188–197. Crossref | Google Scholar

Girgus, J. S., & Yang, K. (2015). Gender and depression. *Current Opinion in Psychology, 4*, 53–60. Crossref | Google Scholar

Liu, Y., Zhang, L., Guo, N., & Jiang, H. (2021). Postpartum depression and postpartum post-traumatic stress disorder: prevalence and associated factors. *BMC Psychiatry, 21*(1), 1–11. Crossref | Google Scholar

Machi, L. A. (2016). *The literature review: six steps to success / Lawrence A. Machi, Brenda T. McEvoy*. (Third edit). Corwin, a SAGE Company. Google Scholar

National Institute of Mental Health. (2021). Substance Use and Co-Occurring Mental Disorders. Retrieved from https://www.nimh.nih.gov/health/topics/substance-use-and-mental-health.

Nurbaeti, I., Deoisres, W., & Hengudomsub, P. (2019). Association between psychosocial factors and postpartum depression in South Jakarta, Indonesia. *Sexual and Reproductive Healthcare, 20*(February 2018), 72–76. Crossref | Google Scholar

O'Hara, M. W., & Wisner, K. L. (2014). Perinatal mental illness: Definition, description and aetiology. *Best Pract Res Clin Obset Gynaecol, 28*(1), 3–12. Crossref | Google Scholar

Patel, V., & Prince, M. (2010). Global Mental Health: a new global health field comes of age. *JAMA, 303*(19), 1976–1977. Crossref | Google Scholar

Phillips, A. C. (2013). Perceived Stress. In M. D. Gellman & J. R. Turner (Eds.), *Encyclopedia of Behavioral Medicine* (pp. 1453–1454). Springer New York. Crossref

Raghavan, A., Satyanarayana, V. A., Fisher, J., Ganjekar, S., Shrivastav, M., Anand, S., Sethi, V., & Chandra, P. S. (2022). Gender Transformative Interventions for Perinatal Mental Health in Low and Middle Income Countries—A Scoping Review. *International Journal of Environmental Research and Public Health, 19*(19), 12357. Crossref | Google Scholar

Rahman, A., Surkan, P. J., Cayetano, C. E., Rwagatare, P., & Dickson, K. E. (2013). Grand Challenges: Integrating Maternal Mental Health into Maternal and Child Health Programmes. *PLoS Medicine, 10*(5). Crossref | Google Scholar

Richman, Judith; Raskin, Valerie; Gaines, C. (1991). Gender Roles, Social Support, and Postpartum Depressive Symptomatology (pp. 139–147). Google Scholar

Syam, A., Iskandar, I., Qasim, M., Kadir, A., & Usman, A. N. (2020). Identifying risk factors of prenatal depression among mothers in Indonesia. *Enfermeria Clinica, 30*, 550–554. Crossref | Google Scholar

Tefera, T. B., Erena, A. N., Kuti, K. A., & Hussen, M. A. (2015). Perinatal depression and associated factors among reproductive aged group women at Goba and Robe Town of Bale Zone, Oromia Region, South East Ethiopia. *Maternal Health, Neonatology and Perinatology, 1*(12), 1–9. Crossref | Google Scholar

Wang, D., Li, Y. L., Qiu, D., & Xiao, S. Y. (2021). Factors Influencing Paternal Postpartum Depression: A Systematic Review and Meta-Analysis. *Journal of Affective Disorders, 293*(May), 51–63. Crossref | Google Scholar

WHO. (2008). Maternal Mental Health And Child Health And Development In Low And Middle Income Countries. *World Health*, February, 1–39. Retrieved from https://apps.who.int/iris/bitstream/handle/10665/43975/9789241597142_eng.pdf.

WHO. (2011). Gender mainstreaming for health managers: a practical approach. In *WHO*. Crossref | Google Scholar

Widiasih, R., Rais, Y., Fithriyah, N., Damayanti, & Puspitasari, N. R. (2021). Intervention for preventing postpartum depression: a systematic review of studies in Indonesia. *British Journal of Midwifey, 29*(7). Google Scholar

Wu, D., Jiang, L., & Zhao, G. (2022). Additional evidence on prevalence and predictors of postpartum depression in China: A study of 300,000 puerperal women covered by a community-based routine screening programme. *Journal of Affective Disorders, 307*(3012), 264–270. Crossref | Google Scholar

Yang, K., Wu, J., & Chen, X. (2022). Risk factors of perinatal depression in women: a systematic review and meta-analysis. *BMC Psychiatry, 22*(1), 1–11. Crossref | Google Scholar