Mental health challenges during pregnancy: Role of nurses in early identification

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Abstract:
Mental health during pregnancy is a critical yet often neglected aspect of maternal healthcare. The antenatal period is characterized by significant biological, psychological, and social changes that increase the vulnerability of women to mental health disorders such as depression, anxiety, and post-traumatic stress disorder. These conditions not only affect maternal well-being but also have serious implications for fetal development, birth outcomes, and long-term child health. Early identification of mental health challenges is essential to prevent complications and ensure timely intervention. Nurses, as primary healthcare providers in antenatal settings, play a pivotal role in recognizing early signs and symptoms of psychological distress through observation, screening, and patient interaction. Their responsibilities include conducting routine assessments, providing emotional support, educating patients, and facilitating referrals to specialized care. However, barriers such as stigma, lack of training, limited resources, and time constraints often hinder effective identification and management. This article explores the common mental health challenges faced during pregnancy and emphasizes the crucial role of nurses in early detection and intervention. Strengthening nursing competencies and integrating mental health screening into routine antenatal care can significantly improve maternal and neonatal outcomes.

Keywords:
Maternal Mental Health, Pregnancy, Antenatal Depression, Anxiety Disorders, Early Identification, Nursing Role, Screening Tools, Maternal Care, Prenatal Health, Mental Health Intervention.

1. Introduction:
Pregnancy is a complex developmental phase involving profound physiological, hormonal, and emotional transitions that significantly influence a woman's mental well-being, making it a critical period for psychological vulnerability and adaptation (Biaggi et al., 2016). The interplay of biological factors such as hormonal fluctuations particularly changes in estrogen, progesterone, and cortisol can directly affect mood regulation and stress responses, thereby increasing susceptibility to anxiety and depressive symptoms (Glynn & Sandman, 2018). Psychological factors, including pre-existing mental health conditions, personality traits, coping mechanisms, and previous traumatic experiences, further shape how a woman responds to the demands of pregnancy (Dennis et al., 2017). In addition, social determinants such as socioeconomic status, family support, cultural expectations, and exposure to domestic violence play a crucial role in influencing maternal mental health outcomes (Fisher et al., 2018). The conceptual framework presented in Figure 1 emphasizes that maternal mental health is not determined by a single factor but rather by a dynamic interaction between biological, psychological, and social influences, which together create either resilience or vulnerability during pregnancy (Howard & Khalifeh, 2020). Globally, research indicates that approximately 10–20% of pregnant women experience mental health disorders, with significantly higher prevalence rates reported in low- and middle-income countries due to limited access to healthcare resources

and increased social stressors (World Health Organization, 2022). Antenatal depression and anxiety are among the most common conditions, often underdiagnosed due to stigma and lack of awareness, which further complicates early identification and intervention (Woody et al., 2017). The burden of untreated mental health disorders during pregnancy extends beyond the individual, as maternal psychological distress has been strongly linked to adverse obstetric outcomes such as preterm birth, low birth weight, and intrauterine growth restriction (Grigoriadis et al., 2018). Furthermore, maternal stress and depression can alter fetal neurodevelopment through mechanisms involving increased cortisol levels and placental dysfunction, potentially leading to long-term cognitive, behavioral, and emotional difficulties in children (O'Donnell & Meaney, 2017). Emotional dysregulation during pregnancy may also impair maternal–fetal attachment, which is essential for healthy bonding and caregiving behaviors after birth (Alhusen et al., 2016). In addition, women experiencing poor mental health are more likely to engage in unhealthy behaviors such as inadequate nutrition, substance use, and poor adherence to antenatal care, further exacerbating risks for both mother and fetus (Liu et al., 2017). The cumulative effect of these factors highlights the importance of understanding maternal mental health as a multidimensional construct that requires comprehensive assessment and care (Stein et al., 2019). Evidence also suggests that early life stressors and social inequities significantly contribute to disparities in maternal mental health outcomes, particularly among marginalized populations (Sidebottom et al., 2018). Cultural beliefs and stigma surrounding mental illness often discourage women from seeking help, leading to delayed diagnosis and treatment (Hanlon et al., 2019). Therefore, addressing maternal mental health requires not only clinical interventions but also broader public health strategies that consider social determinants and promote supportive environments (Rahman et al., 2017).

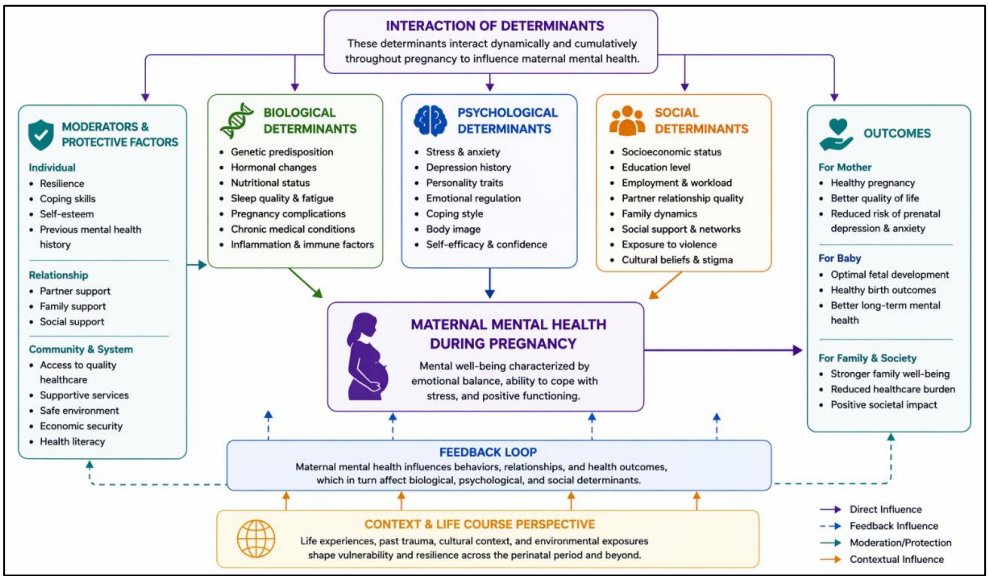


Figure. 1: Conceptual framework showing biological, psychological, and social determinants influencing maternal mental health during pregnancy

2. Common mental health disorders during pregnancy:

Depression, anxiety disorders, post-traumatic stress disorder (PTSD), and bipolar disorder represent some of the most significant mental health conditions affecting women during pregnancy, each contributing uniquely to maternal psychological burden and clinical complexity (Woody et al., 2017). Mental health disorders during pregnancy are varied and frequently underdiagnosed, often due to stigma, lack of routine screening, and overlap of symptoms with normal pregnancy-related changes (Howard & Khalifeh, 2020). As illustrated in Figure 2, depression and anxiety are the most commonly reported conditions, affecting a substantial proportion of pregnant women globally and contributing significantly to maternal morbidity (Biaggi et al., 2016). Antenatal depression is characterized by persistent sadness, loss of interest in daily activities, fatigue, sleep disturbances, and feelings of hopelessness, all of which can interfere with a woman's ability to care for herself and her developing fetus (Gavin et al., 2015).

Anxiety disorders, including generalized anxiety disorder and panic disorder, are also highly prevalent and typically manifest as excessive and uncontrollable worry related to childbirth, fetal health, and parenting responsibilities (Dennis et al., 2017). These anxiety symptoms can lead to physiological stress responses that negatively impact pregnancy outcomes, including increased risk of preterm birth (Grigoriadis et al., 2018). PTSD during pregnancy may arise from prior traumatic experiences such as miscarriage, stillbirth, domestic

violence, or childhood abuse, and is often associated with symptoms like flashbacks, hypervigilance, and emotional numbness (Yildiz et al., 2017).

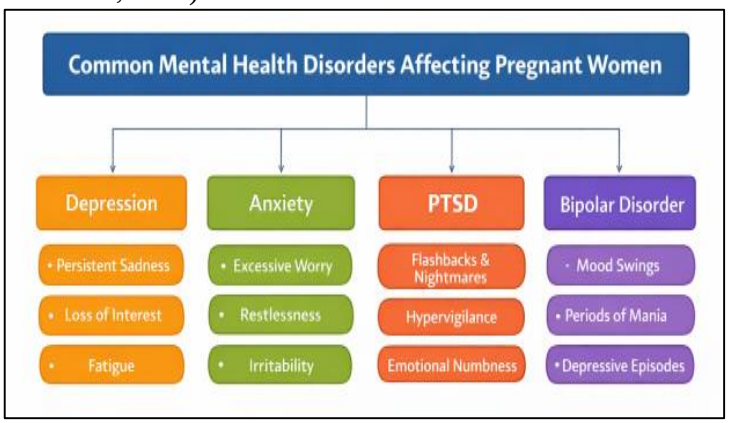


Figure. 2: Classification of common mental health disorders affecting pregnant women, including depression, anxiety, PTSD, and bipolar disorder

Women with PTSD may experience heightened fear related to childbirth, which can complicate antenatal care and delivery experiences (Ayers et al., 2016). Bipolar disorder, although less common, is a severe mental illness characterized by episodes of mania and depression, and it carries significant risks during pregnancy, including relapse and potential harm if not properly managed (Wesseloo et al., 2016). The management of bipolar disorder during pregnancy is particularly challenging due to the need to balance medication risks with the dangers of untreated illness (Viguera et al., 2017). Furthermore, comorbidity among these disorders is common, with many women experiencing overlapping symptoms that complicate diagnosis and treatment (Falah-Hassani et al., 2017). The presence of untreated mental health disorders during pregnancy not only affects maternal well-being but also has long-term consequences for fetal development, including neurobehavioral and emotional outcomes in children (O'Donnell & Meaney, 2017). Early identification and appropriate intervention are therefore essential to mitigate these risks and improve outcomes (Stein et al., 2019). Despite the availability of effective treatments, many cases remain undetected due to inadequate screening practices and limited awareness among healthcare providers (Sidebottom et al., 2018). Social stigma surrounding mental illness further discourages women from seeking help, particularly in low-resource settings (Hanlon et al., 2019). Therefore, a comprehensive understanding of these disorders and their manifestations is critical for healthcare professionals, especially nurses, who play a key role in early identification and support (Howard et al., 2018). The relationship between different disorders, their symptoms, and their effects on pregnancy outcomes is summarized in Table 1, which highlights how each condition can significantly influence both maternal and fetal health.

Table. 1: Summary of common mental health disorders during pregnancy with their symptoms and impact on maternal and fetal outcomes

Disorder	Symptoms	Pregnancy Impact
Depression	Sadness, fatigue	Low birth weight
Anxiety	Fear, restlessness	Preterm birth
PTSD	Flashbacks	Poor bonding
Psychosis	Delusions	High maternal risk

3. Risk factors for mental health challenges:

Biological factors, psychological stressors, and social determinants collectively contribute to the development of mental health challenges during pregnancy through a complex and dynamic interplay that affects both maternal well-being and pregnancy outcomes (Chauhan et al., 2022). Mental health challenges during pregnancy arise from a multifactorial interaction of risk factors, where biological processes such as hormonal fluctuations, neuroendocrine changes, and genetic predisposition significantly influence emotional regulation and stress responses (Zhou et al., 2024). As shown in Figure 3, biological factors including changes in estrogen, progesterone, and cortisol levels interact with psychological stressors such as prior trauma, low self-esteem, and maladaptive coping mechanisms, thereby increasing susceptibility to anxiety and depression during pregnancy (Wang et al., 2024). Psychological stressors play a critical role in shaping maternal mental health, as women with a history of adverse life events or chronic stress are more likely to experience emotional instability and depressive symptoms during pregnancy (Khan et al., 2023). Social determinants, including poverty, low socioeconomic status, lack of family support, and exposure to domestic violence, further exacerbate vulnerability by creating an environment of chronic stress and limited access to

healthcare resources (Miao et al., 2024). Evidence indicates that socioeconomic disparities are strongly associated with higher rates of mental health disorders among pregnant women, particularly in marginalized populations where healthcare access is limited (Patel et al., 2018). Furthermore, unintended or unplanned pregnancies, lack of reproductive autonomy, and inadequate social support systems significantly increase the risk of antenatal depression and anxiety (Rahman et al., 2017). Women with a prior history of mental illness are particularly at risk of recurrence during pregnancy, especially if treatment is discontinued or adequate support is not provided, highlighting the importance of continuous mental health care (Biaggi et al., 2016). Psychological resilience, coping strategies, and access to supportive relationships can act as protective factors, reducing the negative impact of stressors on maternal mental health (AliSher et al., 2024). However, cultural stigma surrounding mental illness often prevents early reporting and timely intervention, particularly in low- and middle-income countries where mental health awareness remains limited (Hanlon et al., 2019). The cumulative effect of these biological, psychological, and social factors highlights the importance of adopting a holistic approach to maternal mental health that integrates clinical, social, and policy-level interventions (Runkle et al., 2023). Additionally, emerging evidence suggests that maternal mental health is closely linked to long-term child development outcomes, including cognitive function and emotional regulation, further emphasizing the need for early identification and management of risk factors during pregnancy (Qiu et al., 2024).

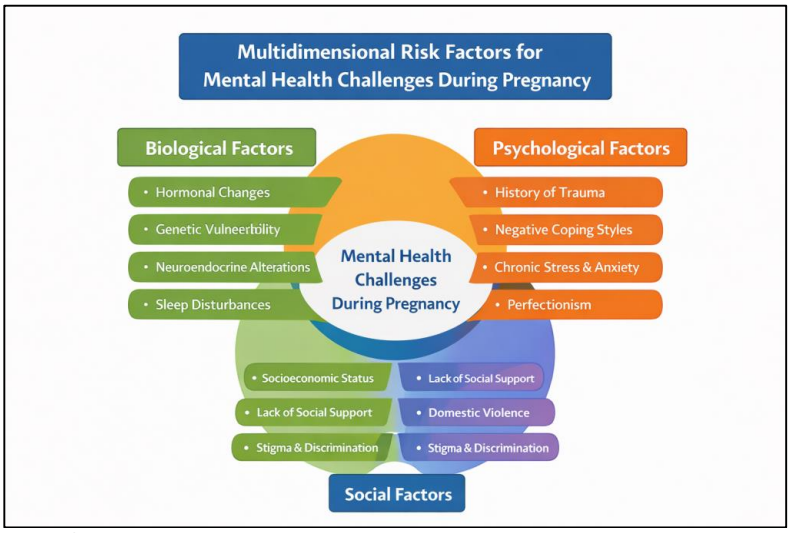


Figure. 3: Multidimensional risk factors contributing to mental health challenges during pregnancy, including biological, psychological, and social elements

4. Impact of mental health problems on mother and child:

Stress leading to hormonal imbalance, poor nutrition resulting in fetal growth restriction, and emotional distress causing impaired maternal–infant bonding represent critical pathways through which maternal mental health influences pregnancy outcomes (Glover et al., 2018). The pathways through which maternal mental health affects pregnancy outcomes, as illustrated in Figure 4, demonstrate how psychological disturbances during pregnancy can trigger physiological and behavioral changes that adversely impact both the mother and the developing fetus (O'Donnell et al., 2017). Chronic maternal stress activates the hypothalamic–pituitary–adrenal (HPA) axis, leading to elevated cortisol levels that can cross the placenta and interfere with fetal brain development and stress regulation systems (Van den Bergh et al., 2020). Similarly, depression and anxiety during pregnancy are often associated with reduced motivation and energy, resulting in poor self-care practices such as inadequate nutrition, irregular antenatal visits, and neglect of medical advice (Liu et al., 2017). Poor maternal nutrition, in turn, contributes to fetal growth restriction and increases the risk of low birth weight and intrauterine developmental complications (Black et al., 2019). Emotional distress may also lead to maladaptive coping behaviors, including substance use such as smoking or alcohol consumption, which further compromises fetal health and increases the likelihood of adverse birth outcomes (Cook et al., 2017). In addition to physiological effects, maternal mental health significantly influences emotional bonding between the mother and fetus, which begins during pregnancy and continues postpartum (Alhusen et al., 2016). Impaired bonding due to maternal depression or anxiety can result in reduced maternal responsiveness, affecting early attachment and the child's emotional security (Stein et al., 2019). Studies have consistently demonstrated that maternal depression and anxiety are associated with increased risks of preterm birth, low birth weight, and delayed cognitive and emotional development in

children (Grigoriadis et al., 2018). Furthermore, prolonged exposure to maternal stress hormones in utero has been linked to long-term neurodevelopmental issues, including behavioral problems and difficulties in emotional regulation (King et al., 2019). The impact of maternal mental health is therefore not limited to pregnancy but extends into infancy and childhood, influencing developmental trajectories and overall well-being (Madigan et al., 2018). Additionally, maternal psychological distress can affect breastfeeding practices and caregiving behaviors, further impacting infant health and development (Figueiredo et al., 2018). These interconnected pathways highlight the importance of early identification and intervention in maternal mental health to prevent both immediate and long-term adverse outcomes (Howard et al., 2018). Addressing maternal stress, promoting proper nutrition, and supporting emotional well-being are essential components of comprehensive antenatal care that can significantly improve both maternal and child health outcomes (WHO, 2022).

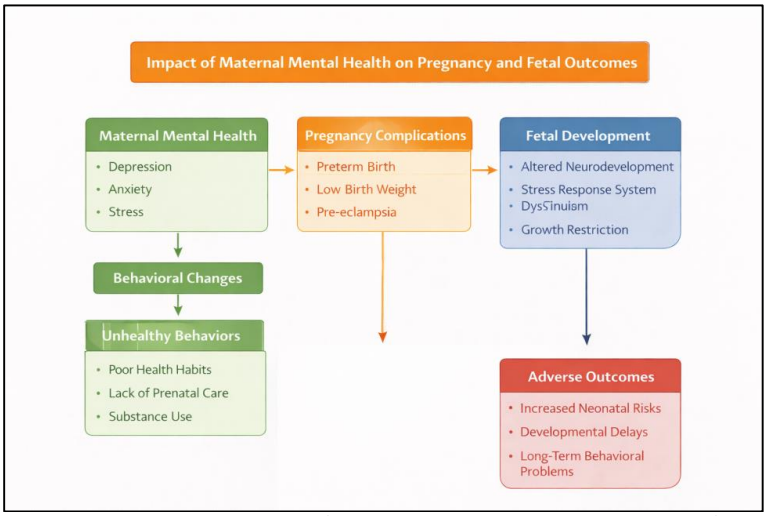


Figure. 4: Pathways illustrating the impact of maternal mental health on pregnancy and fetal outcomes

5. Importance of early identification:

Routine screening, risk assessment, diagnosis, and referral constitute a structured and systematic pathway for the early identification of mental health disorders during pregnancy, enabling timely intervention and improved health outcomes (Howard et al., 2018). Early identification plays a critical role in preventing the escalation of mental health disorders, as many symptoms initially present in mild or subclinical forms but can progress into severe conditions if left unrecognized and untreated (Byatt et al., 2017). As outlined in Figure 5, the process begins with routine screening during antenatal visits, where healthcare providers particularly nurses use standardized tools to assess emotional well-being and detect early signs of distress (Cox et al., 2019). Routine screening ensures that all pregnant women are evaluated consistently, regardless of whether they voluntarily report symptoms, thereby reducing the risk of missed diagnoses (Sidebottom et al., 2018).

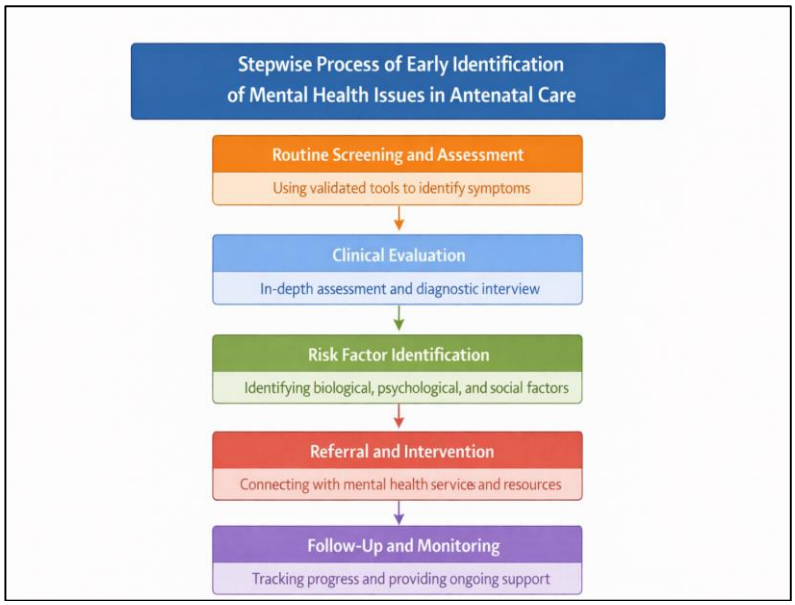


Figure. 5: Stepwise process of early identification of mental health issues in antenatal care settings

Following screening, risk assessment is conducted to identify individuals who may be at higher risk due to factors such as a history of mental illness, lack of social support, or exposure to stressful life events (Biaggi et al., 2016). This step allows healthcare providers to prioritize care and monitor vulnerable women more closely throughout pregnancy (Falah-Hassani et al., 2017). Diagnosis is the next critical stage, where positive screening results are further evaluated using clinical judgment and, when necessary, formal diagnostic criteria to confirm the presence and severity of a mental health disorder (American Psychiatric Association et al., 2022). Accurate diagnosis is essential for determining appropriate treatment strategies and ensuring that women receive targeted and effective care (Stein et al., 2019). Once a diagnosis is established, referral to specialized mental health services such as psychologists, psychiatrists, or counseling professionals is initiated for comprehensive management (WHO et al., 2022). This step is particularly important for moderate to severe cases that require multidisciplinary intervention and ongoing support (Howard & Khalifeh, 2020). Validated screening tools such as the Edinburgh Postnatal Depression Scale (EPDS) and the Generalized Anxiety Disorder Scale (GAD-7) are widely used in antenatal settings due to their reliability, ease of administration, and effectiveness in identifying symptoms of depression and anxiety (Cox et al., 2019). The use of these tools enhances the accuracy of early detection and provides a standardized method for monitoring changes in mental health status over time (Levis et al., 2020). Early detection through this structured approach enables timely intervention, including counseling, psychosocial support, and, when necessary, pharmacological treatment, thereby significantly improving maternal and neonatal outcomes (O'Connor et al., 2016). Furthermore, integrating mental health screening into routine antenatal care helps normalize discussions around mental health, reduces stigma, and encourages women to seek help without fear of judgment (Hanlon et al., 2019).

Table 2: Commonly used screening tools for assessing mental health conditions in pregnant women and their clinical applications

Tool	Purpose	Application
EPDS	Depression screening	Antenatal clinics
PHQ-9	Severity measurement	Hospitals
GAD-7	Anxiety screening	Primary care

6. Role of nurses in early identification:

Assessment, screening, counseling, and referral constitute the core components of the nursing role in addressing mental health challenges during pregnancy, reflecting a holistic and patient-centered approach to maternal care (Howard et al., 2018). Nurses play a central role in maternal healthcare and are often the first point of contact for pregnant women, positioning them uniquely to identify early signs of psychological distress and initiate timely interventions (Byatt et al., 2017). As depicted in Figure 6, their responsibilities extend beyond physical care to include comprehensive mental health assessment, routine screening using validated tools, provision of basic counseling, and appropriate referral to specialized services when needed (Cox et al., 2019). Assessment involves careful observation of a woman's emotional state, behavior, and

verbal expressions during antenatal visits, enabling nurses to detect subtle indicators such as mood changes, withdrawal, or excessive worry that may signal underlying mental health issues (Sidebottom et al., 2018). Screening further strengthens this process by utilizing standardized instruments like the Edinburgh Postnatal Depression Scale (EPDS) and the Generalized Anxiety Disorder Scale (GAD-7), which allow for systematic evaluation and early detection of depression and anxiety symptoms (Levis et al., 2020). Counseling is another critical aspect of nursing care, where nurses provide emotional support, active listening, reassurance, and basic psychoeducation to help women understand and manage their feelings during pregnancy (Rahman et al., 2017). Through continuous interaction, nurses can build strong therapeutic relationships based on trust and empathy, which encourages pregnant women to openly share their concerns, fears, and emotional struggles without hesitation (Fisher et al., 2018). This trust-building process is essential in overcoming stigma and cultural barriers that often prevent women from seeking help for mental health problems (Hanlon et al., 2019). In addition, nurses play an important role in educating women and their families about the importance of mental health, warning signs of disorders, and available support systems, thereby promoting awareness and reducing misconceptions (WHO et al., 2022). Referral is the final and equally important component, where nurses coordinate with mental health professionals such as psychologists, psychiatrists, and social workers to ensure comprehensive and specialized care for women with moderate to severe conditions (Howard & Khalifeh, 2020). Effective referral systems ensure continuity of care and prevent delays in treatment, which is crucial for improving both maternal and neonatal outcomes (Stein et al., 2019). Furthermore, nurses often act as advocates for their patients by ensuring that mental health concerns are taken seriously within the healthcare system and that appropriate resources are made accessible (O'Connor et al., 2016).

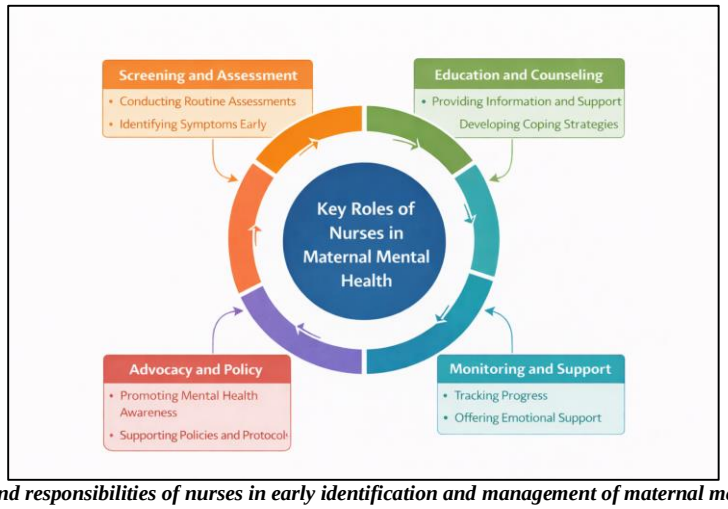


Figure. 6: Key roles and responsibilities of nurses in early identification and management of maternal mental health problems

7. Barriers to early identification:

Social stigma, lack of training, limited healthcare resources, and time constraints represent significant barriers that hinder nurses in effectively identifying and managing mental health issues during pregnancy, ultimately affecting the quality of maternal care (Hanlon et al., 2019). Despite their critical role, nurses often face multiple challenges in recognizing early signs of psychological distress among pregnant women, particularly in settings where mental health is not prioritized within routine antenatal care (Howard et al., 2018). As illustrated in Figure 7, stigma surrounding mental illness remains one of the most prominent barriers, discouraging women from openly discussing their symptoms due to fear of judgment, discrimination, or social rejection (Fisher et al., 2018). This reluctance to disclose emotional concerns leads to underreporting and delays in diagnosis, thereby increasing the risk of untreated mental health conditions (Rahman et al., 2017). In addition to stigma, inadequate training in mental health assessment limits nurses' confidence and competence in identifying psychological symptoms, as many nursing programs focus primarily on physical health rather than mental health integration (Byatt et al., 2017). Without proper knowledge and skills, nurses may overlook subtle behavioral or emotional changes that indicate underlying disorders (Sidebottom et al., 2018). Limited healthcare resources, particularly in low- and middle-income settings, further compound the problem by restricting access to screening tools, mental health specialists, and referral services (Patel et al., 2018). Heavy workloads and staff shortages also contribute to time constraints, leaving nurses with insufficient time to conduct thorough assessments or engage in meaningful conversations with patients about their mental health (O'Connor et al., 2016). These constraints often result in a greater focus on physical examinations and routine procedures, with mental health receiving minimal attention

(Stein et al., 2019). Additionally, cultural beliefs and misconceptions about mental illness may influence both patients and healthcare providers, creating further obstacles to open communication and effective care (AliSher et al., 2024). Addressing these barriers requires a multifaceted approach, including enhancing mental health training for nurses, integrating routine screening into antenatal care, increasing resource allocation, and promoting awareness to reduce stigma (WHO et al., 2022). Strengthening healthcare systems and supporting nurses through education and policy interventions can significantly improve early identification and management of mental health challenges during pregnancy, ultimately leading to better maternal and neonatal outcomes (Howard & Khalifeh, 2020).

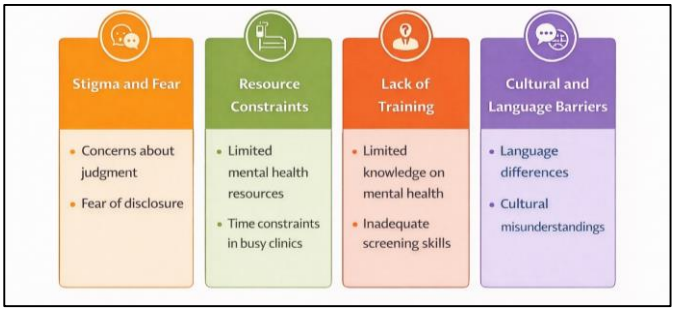


Figure. 7: Major barriers affecting effective screening and early identification of mental health issues during pregnancy

8. Conclusion

Mental health during pregnancy is a vital component of maternal care that requires timely attention and intervention. Various biological, psychological, and social factors contribute to mental health challenges, which can adversely affect both the mother and the developing fetus. Early identification through systematic screening and assessment is essential to prevent complications. Nurses play a key role in recognizing symptoms, providing support, and ensuring appropriate referrals. However, barriers such as stigma, limited resources, and lack of training must be addressed. Strengthening nursing capacity and integrating mental health into routine antenatal care can significantly improve outcomes for mothers and their children.

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