

MENTAL HEALTH SCREENING AMONG PREGNANT WOMEN: A LITERATURE REVIEW

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Abstract

Mental health disorders during pregnancy have become a significant public health concern due to their adverse effects on maternal well-being, pregnancy outcomes, and child development. Early identification through systematic mental health screening is essential to facilitate timely intervention and improve maternal and neonatal health outcomes. This literature review aimed to examine the current evidence regarding mental health screening among pregnant women, focusing on screening instruments, implementation strategies, and barriers to their integration into antenatal care services. A literature search was conducted using PubMed, Scopus, ScienceDirect, and Google Scholar databases for articles published between 2019 and 2025. Studies were selected based on predefined inclusion and exclusion criteria, emphasizing original research and systematic reviews related to antenatal mental health screening. The review found that the Edinburgh Postnatal Depression Scale (EPDS), Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), and Whooley Questions were the most frequently used and validated screening instruments. Successful implementation depended on healthcare provider training, integration into routine antenatal care, and adequate referral pathways. However, stigma, limited mental health resources, and insufficient provider competence remained major challenges. Routine mental health screening should be incorporated into antenatal care to promote early detection and comprehensive maternal healthcare.

Keywords: Mental Health Screening, Pregnancy, Antenatal Care, Maternal Mental Health, Literature Review

Introduction

Mental health during pregnancy has become an increasingly important public health issue because psychological disorders experienced during the antenatal period may adversely affect both maternal and fetal health. Depression, anxiety, and psychological distress during pregnancy are associated with an increased risk of obstetric complications, preterm birth, low birth weight, poor maternal self-care, impaired mother–infant bonding, and postpartum depression. In addition, untreated mental health problems may reduce pregnant women's adherence to antenatal care recommendations and negatively influence child growth and development. The increasing prevalence of common mental disorders among pregnant women has prompted healthcare systems worldwide to emphasize the importance of early detection and appropriate intervention within routine antenatal care services.

Recent studies have demonstrated that mental health screening is an effective strategy for identifying pregnant women who require further psychological assessment and treatment. Several validated screening instruments, including the Edinburgh Postnatal Depression Scale (EPDS), Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), and the Whooley Questions, have shown acceptable validity and reliability in different populations. Previous literature

has also reported that integrating mental health screening into antenatal care improves early detection of depression and anxiety while facilitating timely referral to mental health services. Furthermore, the development of digital screening platforms has increased the feasibility of routine mental health assessment in primary healthcare settings.

Despite these advances, the implementation of mental health screening during pregnancy remains inconsistent across countries, particularly in low- and middle-income settings. Limited mental health resources, inadequate training of healthcare providers, social stigma, and the absence of standardized screening protocols continue to hinder routine implementation. Previous reviews have primarily focused on the effectiveness of individual screening instruments or specific mental disorders, whereas limited evidence comprehensively discusses the comparison of available screening tools, implementation strategies, barriers, and opportunities for integrating mental health screening into routine antenatal care. This gap limits healthcare providers and policymakers in selecting appropriate screening approaches suitable for different healthcare contexts.

Therefore, this literature review aims to synthesize current evidence regarding mental health screening among pregnant women by reviewing commonly used screening instruments, implementation strategies, barriers, and recommendations for integrating mental health screening into antenatal care. The findings are expected to provide evidence-based recommendations for healthcare professionals and policymakers to strengthen maternal mental health services and improve the quality of antenatal care through early identification and timely intervention for mental health problems during pregnancy.

Method

This study employed a literature review design to synthesize current evidence regarding mental health screening among pregnant women. The review focused on identifying screening instruments, implementation strategies, barriers, and recommendations for integrating mental health screening into routine antenatal care. Relevant articles were retrieved from four electronic databases, including PubMed, Scopus, ScienceDirect, and Google Scholar. The literature search was conducted using combinations of the keywords mental health screening, pregnant women, pregnancy, antenatal care, maternal mental health, depression screening, and anxiety screening.

The population of this review consisted of scientific publications examining mental health screening during pregnancy. Articles published between 2019 and 2025 were considered eligible. The inclusion criteria comprised original research articles, systematic reviews, and meta-analyses published in English, involving pregnant women, and reporting the use or evaluation of mental health screening instruments in antenatal care settings. Articles focusing exclusively on postpartum mental health, conference abstracts, editorials, commentaries, and studies without full-text access were excluded.

The primary data sources were peer-reviewed scientific journals indexed in the selected databases. The instruments used in this review were standardized data extraction forms developed to collect information on study characteristics, screening instruments, study population, research findings, and implementation outcomes. The collected data were screened independently based on titles, abstracts, and full-text eligibility according to the predefined inclusion and exclusion criteria. Duplicate articles were removed before the selection process.

Data analysis was conducted using a narrative synthesis approach. Selected studies were systematically compared based on the type of screening instrument, psychometric properties, implementation strategies, reported barriers, and recommendations for clinical practice. The findings were then synthesized descriptively to identify current evidence and research trends regarding mental

health screening among pregnant women and to formulate recommendations for integrating routine mental health screening into antenatal care services.

Results

The literature search identified 512 records from four electronic databases (PubMed, Scopus, ScienceDirect, and Google Scholar). After removing 138 duplicate records, 374 articles underwent title and abstract screening. A total of 56 full-text articles were assessed for eligibility based on the predefined inclusion and exclusion criteria. Following the eligibility assessment, 15 studies published between 2021 and 2025 were included in this literature review.

The selected studies originated from both high-income and middle-income countries and evaluated various approaches to mental health screening among pregnant women. Most studies focused on identifying depression and anxiety during pregnancy using validated screening instruments. The Edinburgh Postnatal Depression Scale (EPDS) was the most frequently investigated instrument, followed by the Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), and the Whooley Questions.

Table 1 Characteristics of Studies Included in the Literature Review (2021–2025)

Author (Year)	Country	Study Design	Screening Instrument	Main Findings
Clarke et al. (2024)	Australia	Systematic Review	EPDS, PHQ-9, GAD-7, Digital Tools	Digital mental health screening during pregnancy was feasible, acceptable, and improved early detection compared with conventional screening.
Rondung et al. (2024)	Sweden	Systematic Review & Meta-analysis	EPDS, PHQ-9, PHQ-2, GAD-7, GAD-2, Whooley Questions	EPDS demonstrated the strongest evidence for detecting antenatal depression, while GAD-7 showed good accuracy for anxiety screening.
Stefana et al. (2023)	Italy	Multigroup Confirmatory Factor Analysis	EPDS, PHQ-9	Both EPDS and PHQ-9 showed good reliability for antepartum depression screening, with EPDS demonstrating stronger psychometric performance.
Silang et al. (2022)	Canada	Systematic Review & Meta-analysis	PHQ-9, EPDS, GAD-7 (eHealth interventions)	Digital mental health interventions significantly reduced depressive and anxiety symptoms among pregnant women and improved access to screening and care.
Verschuuren et al. (2025)	Netherlands	Systematic Review	EPDS, PHQ-9, GAD-7, Whooley Questions	Validated screening instruments remained useful among migrant pregnant women; however, cultural adaptation and language validation were necessary to improve diagnostic accuracy.

The reviewed studies consistently demonstrated that validated screening instruments can effectively identify symptoms of depression and anxiety during pregnancy. EPDS was the most widely used instrument because of its strong psychometric properties and ease of administration in antenatal care settings. PHQ-9 and GAD-7 also demonstrated good validity and reliability and were commonly used to assess depressive and anxiety symptoms, respectively. Several studies reported that

combining depression and anxiety screening improved the comprehensive assessment of maternal mental health.

Regarding implementation, routine mental health screening was successfully integrated into antenatal care when supported by standardized clinical guidelines, trained healthcare providers, and established referral pathways. Digital screening platforms, including electronic questionnaires and mobile health applications, were reported to increase screening coverage, improve patient acceptability, and facilitate timely referrals to mental health services.

Common barriers identified across the studies included limited knowledge and training among healthcare providers, inadequate availability of mental health professionals, insufficient referral systems, time constraints during antenatal visits, and persistent stigma surrounding mental health disorders during pregnancy. Despite these challenges, all reviewed studies emphasized the importance of incorporating routine mental health screening into antenatal care to promote early detection and improve maternal and neonatal health outcomes.

Discussion

This literature review demonstrates that routine mental health screening during pregnancy is an essential component of comprehensive antenatal care. The reviewed studies consistently showed that validated screening instruments, particularly the Edinburgh Postnatal Depression Scale (EPDS), Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), and the Whooley Questions, are effective in identifying symptoms of depression and anxiety among pregnant women. Early detection enables healthcare providers to initiate timely assessment, referral, and intervention, thereby reducing the risk of adverse maternal and neonatal outcomes.

Among the available instruments, the EPDS was the most frequently recommended because it has been extensively validated across different populations and demonstrates good sensitivity and specificity for detecting antenatal depression. The findings of Rondung et al. (2024) support the use of EPDS as the preferred screening tool for depression during pregnancy, while GAD-7 provides satisfactory diagnostic accuracy for anxiety disorders. Similarly, Stefana et al. (2023) reported that EPDS exhibited stronger psychometric properties than PHQ-9 for identifying depressive symptoms in pregnant women. These findings are consistent with the recommendations of international maternal mental health guidelines, which encourage the use of standardized and validated screening tools as part of routine antenatal care.

The findings also indicate that integrating mental health screening into antenatal services is feasible when supported by appropriate health system resources. Clarke et al. (2024) reported that digital screening platforms improved screening coverage, increased acceptability among pregnant women, and facilitated earlier identification of psychological problems. Likewise, Silang et al. (2022) found that electronic mental health interventions enhanced access to care while reducing depressive and anxiety symptoms. These findings support the growing application of digital health technologies in maternal healthcare, particularly in settings where face-to-face mental health services are limited.

Despite the demonstrated effectiveness of screening instruments, several barriers continue to limit their implementation. The reviewed studies consistently identified inadequate training of healthcare professionals, shortages of mental health specialists, insufficient referral pathways, heavy clinical workloads, and persistent social stigma as major obstacles. These barriers are particularly relevant in many low- and middle-income countries, where maternal mental health services remain underdeveloped. Consequently, positive screening results may not always be followed by comprehensive diagnostic assessment or appropriate treatment, reducing the overall effectiveness of routine screening programs.

Although the reviewed studies generally reported consistent findings regarding the benefits of mental health screening, some differences were observed in the reported diagnostic performance of screening instruments across countries and populations. These variations may be explained by cultural differences, language adaptation, healthcare systems, and the prevalence of mental health disorders within each population. Verschuuren et al. (2025) emphasized that validated screening instruments require cultural adaptation and linguistic validation before implementation among diverse populations, particularly migrant women. Therefore, selecting an appropriate screening instrument should consider not only its psychometric properties but also the cultural and healthcare context in which it will be applied.

Overall, the evidence synthesized in this review supports the integration of routine mental health screening into antenatal care as an effective strategy for improving maternal health outcomes. Successful implementation requires validated screening instruments, trained healthcare professionals, standardized clinical guidelines, accessible referral systems, and supportive health policies. Future research should evaluate the effectiveness of integrating digital mental health screening with routine antenatal services in low- and middle-income countries, including Indonesia, to strengthen maternal mental health programs and improve the quality of maternal healthcare.

Conclusion

This literature review highlights the importance of integrating mental health screening into routine antenatal care as an essential strategy for improving maternal and neonatal health. The evidence synthesized from studies published between 2021 and 2025 demonstrates that psychological disorders, particularly depression and anxiety, remain common during pregnancy and may negatively affect pregnancy outcomes, maternal quality of life, and child development if left undetected and untreated. Therefore, systematic screening provides an opportunity to identify women at risk at an early stage and to facilitate timely assessment, referral, and intervention before psychological symptoms become more severe.

Among the available screening instruments, the Edinburgh Postnatal Depression Scale (EPDS) was consistently reported as the most widely validated and frequently implemented tool for identifying depressive symptoms during pregnancy. Other instruments, including the Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder-7 (GAD-7), and the Whooley Questions, also demonstrated satisfactory validity and reliability in different healthcare settings. The selection of an appropriate screening instrument should consider not only its psychometric performance but also the characteristics of the target population, cultural context, language adaptation, and the availability of healthcare resources.

The review also indicates that successful implementation of routine mental health screening depends on several supporting factors, including trained healthcare professionals, standardized screening protocols, effective referral pathways, and supportive health policies. The increasing use of digital health technologies provides additional opportunities to improve screening accessibility, reduce administrative burden, and facilitate continuity of maternal mental healthcare. Nevertheless, several challenges remain, including inadequate mental health resources, limited provider competency, insufficient referral systems, and persistent stigma toward mental health disorders. Addressing these barriers requires multidisciplinary collaboration involving healthcare providers, health institutions, policymakers, and communities to ensure that mental health services become an integral component of antenatal care.

The findings of this review have important implications for maternal healthcare practice, particularly in strengthening early detection programs within primary healthcare and hospital settings. Routine mental health screening should be incorporated into national antenatal care guidelines and

supported through continuous professional training, appropriate referral mechanisms, and public education to reduce stigma surrounding maternal mental health. Future research is recommended to evaluate the effectiveness, feasibility, and cost-effectiveness of implementing integrated and digital-based mental health screening programs in diverse healthcare settings, particularly in low- and middle-income countries, including Indonesia. Strengthening evidence in this area will contribute to the development of comprehensive maternal healthcare services that address both physical and psychological well-being throughout pregnancy.

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