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Research Article

A Review of Progress and Challenges of Antenatal Psychosocial Assessment for Decreasing Perinatal Mental Health Morbidity

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Received: September 21, 2021; **Published:** October 18, 2021

Abstract

Introduction: Although depression screening has been recommended in clinical practice guidelines, there are debates regarding the benefits of routine screening during the perinatal period. This narrative review aims to inform this debate by synthesizing evidence related to the overall benefit of antenatal psychosocial assessment programs in terms of engagement with appropriate mental health services, focusing on women's acceptability of screening, and perceived barriers that may hinder the implementation of screening during obstetric care.

Methods: Four electronic databases, PubMed/MEDLINE, EMBASE (Ovid), CINAHL/EBSCO, Scopus, and PsycINFO/EBSCO, were searched for studies published between 2016 and 2021. Studies included presented findings relating to referral to or mental health service use due to participation in an antenatal assessment program. Studies that determined perceived barriers or facilitators that may impact the implementation of antenatal psychosocial assessment were also included.

Results: Overall, three out of ten studies showed that the proportion of women who engaged with perinatal mental health services after screening varied, with two studies reporting rates of 40.0% and 47.0%. Only one study reported that antenatal mental health screening effectively increased women's engagement with mental health services. Three studies reported time constraints as one of the main barriers to screening. One study identified factors associated with increased odds of women not fully disclosing their mental health concerns during screening and a randomized controlled trial showed that more women preferred using a tablet over a paper-based survey questionnaire to answer questions on mental health (46.0% versus 29.2%).

Conclusion: Although attempts have been made to address issues on antenatal psychosocial assessment, there are still gaps to cover in this area. Little is known about the progress achieved in antenatal mental assessment to inform healthcare policymakers of required changes to decrease perinatal mental health morbidity.

Keywords: *Antenatal Psychosocial Assessment; Antenatal Psychosocial Screening; Anxiety; Depression; Perinatal Psychosocial Assessment; Mental Health*

Background

Mental health problems during the postnatal period were formerly a main area of research and healthcare focus. However, evidence shows that several risk factors and symptoms of mental disorder could be detected in the perinatal period [1,2], prompting a debate over

the need to introduce antenatal psychosocial screening in obstetric practices and hospitals [3]. Antenatal psychosocial assessment programs are designed to screen for early symptoms of mental illness or factors associated with the development of mental health issues that typically go undetected or are usually not reported [4-6]. Nevertheless, such programs are only recommended if they are conducted within healthcare facilities that have the capacity to make an accurate diagnosis, provide treatment, and follow-up women with mental illness.

In response, countries such as the United States, United Kingdom, and Australia have sought to implement programs or clinical practice guidelines to early identify suspected cases of perinatal depression and intervene as necessary to reduce perinatal mental health morbidity [7-9]. Although many countries have advocated for this approach to improve perinatal mental outcomes, there have been debates regarding the measures and procedures used in antenatal psychosocial assessment programs to reduce mental health morbidity and mortality [9,10].

This narrative review aims to synthesize the evidence related to the overall benefit of antenatal psychosocial assessment programs in terms of engagement with appropriate mental health services, focusing on women's acceptability of screening and perceived barriers that may hinder the implementation of screening during obstetric care.

Methods

Four electronic databases, PubMed/MEDLINE, EMBASE (Ovid), CINAHL/EBSCO, Scopus, and PsycINFO/EBSCO, were searched for studies published in English between 2016 and 2021. The following search terms were used: "antenatal psychosocial assessment", "antenatal psychosocial screening", "perinatal mental health", "perinatal depression", "perinatal mental anxiety", "perinatal anxiety", and "Edinburgh Postnatal Depression Scale." Additionally, the reference lists of included studies and previous systematic reviews [11-15] were reviewed to identify any papers that may have been missed during the search.

Studies were included provided they presented findings relating to referral or mental health service use as a result of participation in an antenatal assessment program. Studies that identified perceived barriers which may impact the implementation of antenatal psychosocial assessment were also included. Additionally, randomized controlled trials or non-randomized controlled studies that included a control group (standard care) were eligible for inclusion. Although challenges were expected in assessing the methodological quality and biases of studies, our broader approach permitted us to include work directly relevant to global health policies, such as the identification and referral of pregnant women with mental disorders. Studies that examined the validity and reliability of screening tools were beyond the scope of this review.

A six-member review team individually conducted the first screening of title and abstract, and then five members performed full-text reviews, working in pairs to screen all retrieved citations. The authors independently reviewed potential studies for inclusion and resolved disagreements through a consensus-based discussion. The full text of potential articles was not retrieved until the screening processes were completed. The method used for data extraction is shown in figure 1.

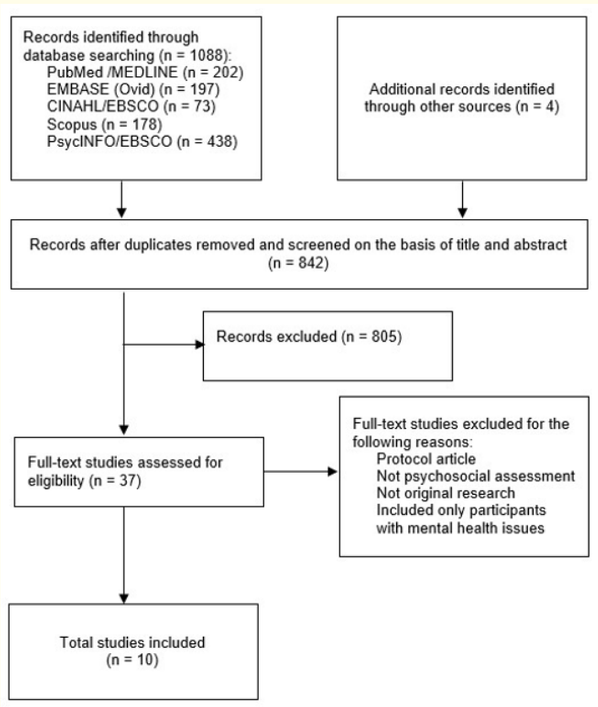

Figure 1: *Literature search flowchart.*

Results

Ten studies met the inclusion criteria, including three reporting engagement with mental health services [16-18] and seven reporting barriers to and acceptability of antenatal psychosocial assessment [17,19-24]. Table 1 summarizes the main characteristics of these studies.

Authors, Year	Country	Study Design	Sample Size	Participants/Pregnancy Period
Ashby., *et al*. [16] 2016	United States	Cohort	885	Antenatal and postnatal
Austin., *et al.* [25] 2021	Australia	Cohort	1788	Antenatal
Ayres., *et al.* [17] 2019	Australia	Cross-sectional	218	Antenatal
Chambers., *et al.* [18] 2016	Australia	Cohort	60,000	Antenatal and postnatal
Kingston., *et al.* [26] 2017	Canada	RCT	636	Antenatal
Mule., *et al.* [21] 2021	Australia	Cohort	1976	Antenatal
Nithianandan., *et al.* [19] 2016	Australia	Qualitative research	37	Midwives, obstetricians, perinatal mental health workers, and refugee health experts
Reilly and Austin, [20] 2021	Australia	Cross-sectional	2817	Antenatal and postnatal
Schmied., *et al.* [23] 2020	Australia	Two-phase, convergent mixed methods	44	Midwives providing antenatal care
Yapp., *et al* [22]. 2019	United Kingdom	Qualitative research	52	Antenatal

Table 1: *Key features of the included studies.*
Abbreviation: RCT: Randomized Controlled Trial.

Impact of antenatal psychosocial assessment on referral activity

The search identified two studies that examined whether antenatal psychosocial assessment impacted referral for treatment or support. In the United States, one cohort study that screened 885 pregnant adolescents at intake reported that 362 participants (41%) had either a positive My Mood Monitor screen or were identified to require mental health support [16]. These patients were referred to the Healthy Expectations Adolescent Response Team program, an integrated model that incorporates screening, diagnosis, and treatment

within the clinic. A smaller study in Australia demonstrated that 37.1% (n = 69) of 186 participants who reported being asked about their mental health during a prenatal visit were offered a referral to perinatal mental health services [17].

Impact of antenatal psychosocial assessment on service utilization and engagement

Three studies explored women's engagement with perinatal mental health services following psychosocial assessments (Table 2) [16-18]. In one study conducted in the United States, 171 (47.0%) of 362 referred patients attended at least the first psychology appointment [16]. Treatment was successfully initiated in 68% of these patients if they scheduled an appointment with the Healthy Expectations Adolescent Response Team, during which mental health symptoms were identified. Only 38% of women successfully started mental health care if an appointment was booked after a positive screening result 16]. Ayres., *et al.* [17] reported that approximately one-third of pregnant women (36.5%; n = 25) accepted a referral to perinatal mental services following the screening. Of these, only 10 (40.0%) attended the appointment. In a large population-based study, investigators measured women's engagement with government-funded mental health care following routine antenatal and postnatal screening for depression, and they reported that the program was effective in increasing women's engagement with mental health services [18]. However, the proportion of women who accessed at least one Medicare Benefits Schedule mental health item during the antenatal period and claimed a general practitioner mental health item postpartum declined from 57% to 39% between 2010 and 2017 [18].

Authors	Assessment Tool(s)	Timeframe	Outcome measures	Results
Ashby., *et al*. [16] 2016	• CES-D • EPDS • Mood disorder questionnaire • My mood monitor	January 1, 2011–January 16, 2014	41% (n = 362)	Rates of positive screens, referrals, and successful initiation of treatment
Ayres., *et al*. [17] 2019	EPDS	February 2017 to July 2017	37.1% (n = 81)	Referral to local perinatal mental health services
Chambers., *et al*. [18] 2020	Mental health MBS items	August 2006 to December 2010	Not applicable	Monthly proportions of women who accessed an MBS mental health item in the perinatal period before and after the National Perinatal Depression Initiative was introduced

Table 2: *Summary of findings relating to the impact of antenatal psychosocial assessment screening on service utilization and engagement.*

Abbreviations: *CES-D: Center for Epidemiologic Studies Scale-Depression; EPDS: Edinburgh Postnatal Depression Scale; HEART: Healthy Expectations Adolescent Response Team; MBS: Medicare Benefits Schedule; PIPA: Perinatal Integrated Psychosocial Assessment.*

Barriers and facilitators of antenatal psychosocial screening

This review identified seven studies that examined barriers or facilitators of antenatal psychosocial screening [19-24,26]. One study included in the review examined midwives' views towards psychosocial assessment, depression screening, and difficulties related to the

evaluation by comparing their perspectives and experiences of two models of care (usual care and Perinatal Integrated Psychosocial Assessment [PIPA]) [23]. Midwives identified a range of barriers to screening, including lack of time to complete the assessment adequately and women's fear of confidentiality breach. Additionally, the midwife participants reported women's difficulties in understanding some questions, prompting them to rely on their own wording in both the Usual Care and PIPA models. Only 12% using the Usual Care model versus 88% using the PIPA model reported relying on the pre-programmed wording of assessment questions (chi-square = 5.17, p = 0.023).

Cohort studies of pregnant women reported several barriers to antenatal psychosocial screening [20,22,24]. A survey conducted in Australia found that although approximately 99% of participants reported feeling comfortable having a psychosocial assessment, they identified several barriers to evaluation, including embarrassment, fear of negative perceptions by the midwife, and a limited time to fully disclose their mental health concerns [21]. In another report from Australia [20], the most common barriers to seeking mental health support among Whooley positive, antenatal women were the normalization of their mental health symptoms (31.0%, n = 11) or fear of being negatively judged by a healthcare professional (28.0%, n = 10).

An Australian cohort study showed that women with a history of mental illness or adverse childhood experiences had twice the odds of reporting that they did not always fully disclose their mental health issues with their midwife during antenatal screening (adjusted odds ratio [OR], 2.03; 95% confidence interval [CI], 1.47 - 2.79; p < 0.001) than their peers without such history (adjusted OR, 1.74, 95% CI, 1.26 - 2.41; p < 0.01) [24]. Women cited fear of the consequences of disclosure in a study conducted in London, United Kingdom [22]. In the report, 51.9% (n = 27) of the women screened positive for depression and 32.7% (n = 17) had a history of interpersonal abuse. Those with a history of depression or interpersonal violence reported difficulties due to emotional reactions to questions asked and concerns about the handling of disclosures. Some women expressed concerns about being judged or felt that the assessment was rushed. Nevertheless, some reported a positive experience, especially when their midwife appeared confident and knowledgeable about mental health.

Of the studies that addressed the barriers and facilitators of antenatal psychosocial screening, only one study, conducted in Australia, reported the barriers and facilitators to implement screening in women from refugee backgrounds [19]. In their report, an overwhelming majority of healthcare workers recognized the need for antenatal mental assessment, however, several factors affected its implementation, including staff training needs, team members to support referral, and established referral pathways. Other identified barriers included communication difficulties due to lack of interpreters, time constraints, and inadequate capacity of mental health services.

Results of a Canadian randomized controlled trial showed that more women in a fully automated Web-based e-screening intervention group reported that they looked forward to or liked using a tablet to answer questions on mental health compared with their peers in the paper-based control group (57.9% versus 37.2%). Further, participants in the intervention group reported they preferred using a tablet to paper compared with their peers in the control group (46.0% versus 29.2%) [26]. However, no significant differences were observed regarding the factors associated with the participants' preferences for Web-based screening (p < 0.2).

Discussion

This review is integral to the ongoing debate over the utility of antenatal psychosocial assessment, focusing on women's acceptability of screening and perceived barriers that may hinder the implementation of screening in obstetric care. Two studies reported that women were offered a referral to mental health services when a mental disorder was identified. Three studies showed that the proportion of women who engaged with perinatal mental health services after screening varied. Only one study found that antenatal mental health screening effectively increased women's engagement with mental health services. Although we did not find any comparative outcome studies detailing differences between women assigned to either antenatal psychosocial assessment or standard care, some studies in

this review reported the perceptions of pregnant women or healthcare workers regarding common barriers to perinatal mental health screening. If systematically addressed, these barriers can help healthcare providers improve the success of screening and, likely, referral and mental service utilization [27-30]. In three studies, healthcare workers and pregnant women cited time constraints as one of the barriers to screening. One study identified factors associated with increased odds of women not fully disclosing their mental health concerns during screening. One randomized controlled trial showed that more women preferred using a tablet over paper to answer questions on mental health, suggesting that pregnant women are open to e-screening.

Previous studies showed varying referral uptake rates to further mental care after psychosocial assessment, with the rates ranging between 12 - 83% [31-38]. Additionally, some investigators claimed that only a small proportion of women who needs mental health care successfully complete treatment [39], suggesting that measures should be put in place to support women throughout the process, from screening through diagnosis and treatment, as a form of continuity of care. Importantly, appropriate psychosocial assessment is necessary to design suitable intervention strategies and formulate public health policies [40]. In fact, clinicians caring for pregnant women should link psychosocial risk assessment to a plan of care by providing appropriate psychosocial support. Thus, mental health services should be easily accessible and include psychotherapy, psychopharmacology, and social health services to increase the success of antenatal psychosocial screening programs.

The findings of this review suggest that fear of confidentiality breach, discomfort with discussing mental health issues, and embarrassment are common barriers to assessment. Women may not want to fully disclose their mental health concerns during evaluation because they do not understand the relevance of psychosocial risk assessment, or they perceive the questions as having no link with their pregnancy (such as a history of adverse childhood experiences) [24]. Some women are more concerned about the disclosure consequences, while others may be distressed to discuss negative experiences during screening, fueling the debate about the appropriateness of including psychosocial assessment in routine care of pregnant women [41]. Furthermore, some investigators have challenged the number and appropriateness of questions that women, their partners/spouses, or relatives may find upsetting and have articulated concerns over the ability of mental health screening tools to accurately reflect these women's feelings [42,43]. However, quantitative data reveal that most women are comfortable with antenatal psychosocial assessment, with one review reporting that 28 out of 29 studies found perinatal mental health screening to be acceptable to most participants, health workers, and the general public [14].

In this review, studies that examined the barriers or facilitators of antenatal psychosocial screening highlighted the relevance of several essential components of psychosocial assessment programs that can improve acceptability to screening and minimize discomfort to pregnant women [19,21-24]. For example, assessors can explain the importance of the questions to women and why these are being asked. Moreover, healthcare personnel can provide helpful feedback regarding the responses given and allocate enough time to discuss women's issues. Although healthcare workers might be willing to assess women and, where necessary, provide psychosocial care and support [44], they should be well-trained and supported so that women do not experience any harm during screening. These issues can be resolved by training and supervising assessors as well as providing continuing professional development; however, it may be challenging to make psychosocial screening effective in obstetric hospitals and outpatient clinics where time is limited.

Previous reports [45,46] have highlighted the importance of using clearly worded user-friendly questions, both for the women and the healthcare staff, to minimize misinterpretation, especially in cases where English is not a woman's first language or the midwife does not have extensive experience in psychosocial screening. Midwives have also reported that it is time-consuming and frustrating to have to rephrase questions [47]. The lack of time to screen and frustrations associated with the use of currently available assessment tools have prompted researchers to investigate the feasibility and acceptability of e-screening in a randomized controlled trial, which suggested that mental health e-screening was feasible and acceptable to pregnant women [26].

Directions for Future Research

Antenatal psychosocial assessment programs are complex interventions that are challenging to evaluate. These challenges are further compounded by the fact that there is no consensus on the screening tool or setting. Future studies, preferably those with a prospective, longitudinal design, should use methods that are both practical and appropriate to the clinical setting in which they are conducted [10,41]. Additionally, the lack of approaches that have been psychometrically tested makes it challenging to measure screening acceptability. Consequently, it is necessary to conduct well-designed surveys in addition to trials to measure screening acceptability.

Limitations of the Study

This review has several limitations. It was challenging to develop a coherent synthesis of the studies due to considerable heterogeneity in reporting. The criteria for referral or follow-up varied among studies, and two studies included healthcare workers. Thus, it was difficult to make relevant comparisons. Additionally, the ten studies included in this review had varied designs and were conducted in different countries, with seven conducted in Australia [17-21,23,24] and one each performed in the United States [16], United Kingdom [22], and Canada [26]. These geographical and methodological characteristics of the studies made it challenging to compare findings.

Conclusion

Although attempts have been made to address issues on antenatal psychosocial assessment, there are still gaps to cover in this area. Notably, during the last five years, there has been a paucity of high-quality studies comparing the impact of referral and mental service utilization among women assigned to antenatal psychosocial assessment versus standard care. However, many countries may have taken the initiative in developing and implementing antenatal psychosocial assessment programs, such that it has become more difficult to conduct randomized controlled trials in this context. Consequently, little is known about the progress achieved in antenatal mental assessment to inform healthcare policymakers of required changes to decrease perinatal mental health morbidity.

Author Contributions

PM conducted the evidence review, and all authors contributed to the interpretation of information and data. PM prepared the manuscript, and all authors critically revised its content. All authors approved the final version submitted for publication.

Conflict of Interest

The authors have no conflicts of interest to declare.

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Volume 5 Issue 11 November 2021