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REVIEW ARTICLE

PERINATAL CARE AND MONITORING STRATEGIES FOR WOMEN WITH MENTAL HEALTH DISORDERS:
An Integrative Review

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Highlights:
(1) Prenatal care for women with mental disorders needs to be discussed.
(2) Women should be asked about their mental health throughout the prenatal period.
(3) Communication between the multidisciplinary team promotes more effective monitoring.
(4) Health education is a tool for understanding mental health warning signs and symptoms.

ABSTRACT

Objective: To analyze the evidence available in the literature on strategies and challenges in prenatal care for pregnant women with mental disorders. *Methodology*: Integrative review of the literature published between 2013 and 2023 using the BVS, Medline®, Scopus, and Web of Science databases. *Results and discussion:* Twenty-one articles were selected. The critical analysis of their contents revealed three categories for discussion: the perceptions and accounts of women with mental disorders about prenatal care; health workers' experiences of and knowledge about mental health during pregnancy; and strategies and interventions for mental health during prenatal care. *Conclusion*: The results demonstrated the importance of more discussions about the prenatal care needs of women with mental disorders. These women should be included and listened to in discussions about the delivery of such care. The approach should involve having adequately trained, inclusive multidisciplinary teams to deliver effective, comprehensive care and support.

Keywords: Women's health; Mental health; Prenatal care; Mental disorders.

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INTRODUCTION

Pregnancy is a time of increased vulnerability, when women undergo physiological, social, and psychological changes that can directly impact their mental health. It is a time that can be especially challenging for women who have mental disorders prior to pregnancy, making it all the more important for them to receive the right care in the right way. However, there is still a lot of stigma surrounding mental health, making it a subject that is often avoided and making the delivery of adequate mental health care during pregnancy more difficult.

In view of the importance of providing specialized care for pregnant women with mental health disorders, there should be discussions about how to incorporate appropriate measures and interventions into routine multidisciplinary care. These should cover issues such as the availability of health services, professional training, and perinatal recommendations. We should clarify at this point that the term "perinatal mental health" refers to the period from pregnancy to one year after the birth of the child, as recommended by the World Health Organization (WHO), in contrast to the term "perinatal period," which covers the period from pregnancy to 28 days after the birth of the child. This distinction helps ensure women's mental health needs are met at this phase of their lives.

Published guidelines, protocols, and studies are commonly used as a basis for taking account of different evidence and health systems when reflecting on the best guidelines for pregnant women with mental disorders, because of the many challenges and decisions associated with prenatal care, childbirth, and the postpartum period.

Some international initiatives have been undertaken that demonstrate or indicate ways forward to help health services take account of the mental health needs of women during pregnancy and post partum. In 2022, the report *Specialist Health Visitors in Perinatal and Infant Mental Health* (Sp HV PIMH), published by the University of Oxford, described the social cost of perinatal mental illnesses and highlighted the importance of specialist health visitors. These specially trained professionals offer care focused on depression, anxiety, and postpartum traumatic events, as well as meditation and relaxation techniques and referrals to specialists, with training that centers on family well-being and mental health. Thus, in addition to recognizing the importance of strengthening the family's bond with the care team, the report recommends having a qualified professional who can spot women at risk at an early stage, as well as providing integrated care in a way that is convenient for the woman and her family[1].

Some countries have specific recommendations to support women's mental health during the perinatal period. For example, in the United Kingdom, nurses and midwives are advised to screen for perinatal depression during the first consultation and are trained in the use of tools to screen for anxiety[2,3]. These recommendations are also mentioned by the American College of Obstetricians and Gynecologists and in Australian guidelines, which discuss best practices for the care of women with severe mental disorders and highlight the importance of communication, taking account of both the language used and the cultural context[4,5]. In Sweden, the guidelines recommend screening during the prenatal and postpartum periods; however, there is a shortage of specialized perinatal mental health services, and improved care for women with severe mental disorders is needed[6]. In general, these recommendations facilitate the early identification of risk factors and provide opportunities for pregnant women to talk about their mental health with health workers.

When the communication of health teams with women is effective and the women have access to prenatal care that includes mental health services, they gain greater autonomy and decision-making power, which can have a positive impact on the management of the pregnancy and ultimately on successful bonding with the infant. Howard et al.[7] and Ranning et al.[8] both emphasize that in severe cases, supervision of the parents by social services could be required as part of mental health monitoring. In such cases, some early interventions could make a difference, such as relapse prevention through psychosocial education, parent education, and mapping of the family's support network[8].

As for the health workers themselves, providing doctors who are not specialized in psychiatry with comprehensive training in therapeutic communication could benefit women who are beginning their care trajectory in primary care. Training professionals to work as specialist health visitors (Sp HV PIMH), as mentioned above, is one good example that other countries could follow, building up a team skilled in conducting home visits focused on perinatal mental health. This would provide a more comprehensive and integrated view of these issues.

It is therefore clear that adopting strategies that focus on women's mental health and monitor or detect previous clinical manifestations, such as manic or depressive episodes, could help map women's clinical and mental health history in the context of the multifactorial influences at play during pregnancy. Evidently, severe mental disorders would ideally have been identified before, but professional monitoring would still be important to prevent relapses during the perinatal period and identify cases of depression or anxiety that are not being monitored.

In 2016, the WHO published the *WHO Recommendations on Antenatal Care for a Positive Pregnancy Experience*[9]. However, this publication, which aimed to reduce maternal morbidity and mortality, facilitate access to quality care, and promote a positive experience for women during pregnancy, did not present any objective recommendations for women's mental health. In the same year, the WHO published the *mhGAP Intervention Guide – Version 2.0*[10], aimed at non-specialist professionals, which sets forth some interventions and guidelines for the population with mental, neurological, and substance use disorders. In its recommendations, this publication focuses on specific care for pregnant and breastfeeding women, recognizing the importance of addressing the particular needs of this vulnerable group. In 2022, the WHO published the *Guide for Integration of Perinatal Mental Health in Maternal and Child Health Services*"[11] with the aim of providing guidelines for the incorporation of perinatal mental health into maternal and infant health services. It is hoped that these guidelines will pave the way for mental health to become a standard component of prenatal care.

In recent Global Burden of Disease studies[12,13], depressive disorders ranked second among the main causes of years of healthy life lost to disability. It is therefore imperative that prenatal care includes the monitoring of issues related to mental health and that public policies and initiatives are developed by the various organizations involved in maternal health.

Thus, considering the scarcity of specific approaches in many health services, the present study aims to analyze the evidence available in the literature on strategies and challenges in the delivery of prenatal care for women with mental disorders.

METHODOLOGY

This study consists of an integrative literature review – a method that involves searching for and critically analyzing scientific literature on a given subject[14]. The methodology for this review involved six stages, namely: formulating the research question; conducting searches of bibliographic databases; categorizing studies using inclusion and exclusion criteria; analyzing the studies retrieved; interpreting and discussing the studies; and presenting the results obtained[15].

For the first stage, the PICo (Population, phenomena of Interest, and Context) framework was used, which assists in the formulation of research questions from different areas, in addition to favoring more effective and targeted searches of databases[16]. As a result, the following research question was developed: What are the main strategies and challenges in prenatal care for pregnant women with mental disorders, based on the evidence available in the literature? Expressed in terms of PICo, P stands for pregnant women with mental disorders, I stands for strategies and challenges, and Co stands for prenatal care.

The searches of databases (stage 2) were conducted in December 2023 and January 2024. The electronic databases consulted were: Virtual Health Library (BVS), Medline® (PubMed®), Scopus (Elsevier), and Web of Science™. The search strategies used for the respective databases are shown in Frame 1.

Electronic database	Search mechanism
Web of Science	ALL=(Pregnant women OR pregnancy OR "maternal health") AND ALL=("mental disorders" OR "Psychiatric Disorders" OR "Severe Mental Disorders" OR "Bipolar and Related Disorders" OR "Bipolar" OR "Bipolar Disorder" OR "Depressive Disorder" OR "Major Depressive Disorder" OR "Depression" OR "psychotic disorders" OR "Schizophrenia" OR "Mood Disorders") AND ALL=("prenatal care" OR "antenatal care" OR "perinatal care" OR "maternal health services" OR "maternal health" OR "Maternal Mental Health" OR "Health Services" OR "Community Mental Health Services" OR "Mental Health Services" OR "Obstetric Nursing" OR Midwifery) AND NOT ALL=("Drug Use Disorders" OR "Drug Abuse" OR "Alcohol-Related Disorders" OR "Alcoholism" OR "Alcohol Dependence" OR "Amphetamine-Related Disorders" OR "cannabis" OR "cocaine" OR "Marijuana Abuse" OR "Cocaine-Related Disorders" OR "Cocaine Abuse" OR "Neurodevelopmental Disorders" OR "Feeding and Eating Disorders" OR "Depression, Postpartum" OR "postnatal depression" OR "Postpartum Dysphoria" OR "perinatal depression" OR "antenatal depression" OR "perinatal mental disorders" OR "COVID-19")
SCOPUS	TITLE-ABS-KEY ("pregnant women" OR "pregnant woman" OR pregnancy OR "maternal health") AND TITLE-ABS-KEY ("mental disorders" OR "Psychiatric Disorders" OR "Severe Mental Disorders" OR bipolar OR "Bipolar Disorder" OR "Depressive Disorder" OR "Depression" OR "Schizophrenia" OR "Mood Disorders") AND TITLE-ABS-KEY ("prenatal care" OR "antenatal care" OR "perinatal care" OR "maternal health services" OR "Health Services" OR "Mental Health Services" OR "Obstetric Nursing" OR midwifery OR midwi*) AND NOT ALL ("Drug Abuse" OR "Alcoholism" OR "Alcohol Dependence" OR "Marijuana Abuse" OR "cannabis" OR "cocaine" OR "Cocaine-Related Disorders" OR "Cocaine Abuse" OR "Neurodevelopmental Disorders" OR "Feeding and Eating Disorders" OR "postpartum depression" OR "postnatal depression" OR "Postpartum Dysphoria" OR "perinatal depression" OR "antenatal depression" OR "perinatal mental disorders") AND PUBYEAR > 2012 AND PUBYEAR < 2024 AND (LIMIT-TO (LANGUAGE , "English") OR LIMIT-TO (LANGUAGE , "Spanish") OR LIMIT-TO (LANGUAGE , "Portuguese"))
Medline	((("Pregnant women"[MeSH Terms] OR "pregnancy"[MeSH Terms]) AND ("mental disorders"[MeSH Terms] OR "Psychiatric Disorders"[Text Word] OR "Severe Mental Disorders"[Text Word] OR "Bipolar and Related Disorders"[MeSH Terms] OR "Bipolar Disorder"[Text Word] OR "Depressive Disorder"[MeSH Terms] OR "Major Depressive Disorder"[Text Word] OR "Depression"[All Fields] OR "Schizophrenia Spectrum and Other Psychotic Disorders"[All Fields] OR "Schizophrenia"[Text Word] OR "Mood Disorders"[Text Word]) AND ("prenatal care"[MeSH Terms] OR "antenatal care"[Text Word] OR "perinatal care"[Text Word] OR "maternal health services"[Text Word] OR "maternal health"[MeSH Terms] OR "Maternal Mental Health"[Text Word] OR "Health Services"[MeSH Terms] OR "Community Mental Health Services"[MeSH Terms] OR "Mental Health Services"[MeSH Terms] OR "Obstetric Nursing"[All Fields] OR "Midwifery"[Text Word])) NOT ("Substance-Related Disorders"[Text Word] OR "Drug Use Disorders"[Text Word] OR "Drug Abuse"[Text Word] OR "Alcohol-Related Disorders"[Text Word] OR "Alcoholism"[Text Word] OR "Alcohol Dependence"[Text Word] OR "Amphetamine-Related Disorders"[Text Word] OR "Marijuana Abuse"[Text Word] OR "Cocaine-Related Disorders"[Text Word] OR "Cocaine Abuse"[Text Word] OR "Neurodevelopmental Disorders"[MeSH Terms] OR "Feeding and Eating Disorders"[Text Word] OR "depression postpartum"[Text Word] OR "postnatal depression"[Text Word] OR "Postpartum Dysphoria"[Text Word] OR "perinatal depression"[Text Word] OR "antenatal depression"[Text Word] OR "antenatal stress"[Text Word] OR "stress"[Text Word])) AND ((2013:2023[pdat]) AND (english[Filter] OR portuguese[Filter] OR spanish[Filter]))

BVS	(ti:(pregnan* OR gesta*)) AND (mh:(f03*)) OR (tw:(“Transtornos Mentais” OR “Mental Disorders” OR “Trastornos Mentales” OR “Transtornos Bipolares e Relacionados” OR “Bipolar and Related Disorders” OR “Trastornos Bipolares y Relacionados” OR “Transtornos Dissociativos” OR “Dissociative Disorders” OR “Trastornos Disociativos” OR “Transtornos Paranoides” OR “Paranoid Disorders” OR “Trastornos Paranoides” OR “Troubles paranoïaques” OR “Paranoia” OR “Psicoses Paranoicas” OR “Psicoses Paranoides” OR “Espectro da Esquizofrenia e Outros Transtornos Psicóticos” OR “Schizophrenia Spectrum and Other Psychotic Disorders” OR “Espectro de Esquizofrenia y Otros Trastornos Psicóticos” OR “Transtornos Psicóticos” OR “Psychotic Disorders” OR “Trastornos Psicóticos” OR “Transtorno Esquizoafetivo” OR “Transtornos Esquizofreniformes”)) OR (“Distúrbios Psiquiátricos” OR “Doença Mental” OR “Doença Psiquiátrica” OR “Doenças Psiquiátricas”) AND (tw:(antenatal care)) OR (“maternal health care” OR “maternal health services” OR “interventions” OR “prenatal” OR “maternal mental health” OR “saúde mental materna”) AND (db:(“MEDLINE” OR “LILACS” OR “BDENF” OR “INDEXPSI”) AND la:(“en” OR “pt” OR “es”)) AND (year_cluster:[2013 TO 2023])

Frame 1 – Terms and Boolean operators used to search the electronic databases.

Source: Own data.

The online platform Rayyan[17] was used to select the articles, facilitating the removal of duplicates and selection of articles based on the following inclusion criteria: articles focusing on strategies and challenges for adequate prenatal care for women with mental disorders, written in Portuguese, English, or Spanish, published between 2013 and 2023. Theses, dissertations, editorials, review articles, and gray literature were excluded.

RESULTS AND DISCUSSION

Of the articles retrieved, 2,333 were excluded because of their study objective, 1,882 were excluded because they were not published between 2013 and 2023, 530 because of the type of publication, 415 due to the study population, and 18 due to the type of study. Figure 1 shows the steps conducted in stage 3.

In the end, 21 articles met all the criteria, addressed the study question, and were maintained for the critical analysis (stage 4) and discussion (stage 5) of the data. Stage 6 consisted of the publication and presentation of the results obtained, which is the aim of this publication.

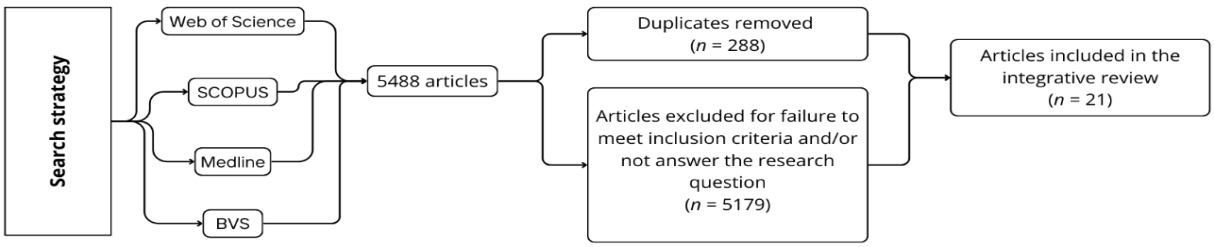

Figure 1 – Flow chart of article selection process

Source: own data.

The analysis of the 21 articles included in the integrative review revealed that the years in which there were most publications were 2019[18–22] and 2015[23–26], accounting for 23.8% and 19%, respectively. Regarding the area of interest of the journals, a multiprofessional distribution was observed, with publications retrieved from journals on public health and women’s health, as well as from journals aimed at midwives, physicians, and nurses. Specifically, 28.6% of the articles were published in journals focused on mental health[19,21,22,25,27,28], 23.8% were published in the journal *Midwifery*[23,26,29–31], and 19% were published in obstetrics-oriented journals[32–35].

Title of article	Authors	Journal	Year of publication	Reference number
Completing the cycle: The use of audit to develop a mental health service in times of austerity	Shah et al.	*Obstetric Medicine*	2013	32
'We just ask some questions...' the process of antenatal psychosocial assessment by midwives	Rollans et al.	*Midwifery*	2013	29
Computer-assisted cognitive behavioral therapy for pregnant women with major depressive disorder	Kim et al.	*Journal of Women's Health*	2014	42
Antenatal mental health referrals: Review of local clinical practice and pregnant women's experiences in England	Darwin et al.	*Midwifery*	2015	23
Assessing the knowledge of perinatal mental illness among student midwives	Phillips	*Nurse Education in Practice*	2015	24
Barriers and facilitators of mental health screening in pregnancy	Kingston et al.	*Journal of Affective Disorders*	2015	25
The first antenatal appointment: An exploratory study of the experiences of women with a diagnosis of mental illness	Phillips & Thomas	*Midwifery*	2015	26
A qualitative inquiry on pregnant women's preferences for mental health screening.	Bayrampour et al.	*BMC Pregnancy and Childbirth*	2017	33
Barriers and facilitators of accessing perinatal mental health services: The perspectives of women receiving continuity of care midwifery	Viveiros & Darling	*Midwifery*	2018	30
Group-based multicomponent treatment to reduce depressive symptoms in women with co-morbid psychiatric and psychosocial problems during pregnancy: A randomized controlled trial	Van Ravesteyn et al.	*Journal of Affective Disorders*	2018	27
Effectiveness of applying problem-solving training on depression in Iranian pregnant women: Randomized clinical trial	Khamseh et al.	*Journal of Education and Health Promotion*	2019	18
Investigation of the effectiveness of psychiatric interventions on the mental health of pregnant women in Kashan City - Iran: A clinical trial study.	Noorbala et al.	*Asian Journal of Psychiatry*	2019	19
Promoting maternal mental health in Ghana: An examination of the involvement and professional development needs of nurses and midwives	Adjorlolo et al.	*Nurse Education in Practice*	2019	20
The Michigan child collaborative care program: Building a telepsychiatry consultation service	Marcus et al.	*Psychiatric Services*	2019	21
"What if I get ill?" perinatal concerns and preparations in primi- and multiparous women with bipolar disorder	Anke et al.	*International Journal of Bipolar Disorders*	2019	22
Assessing mental health during pregnancy: An exploratory qualitative study of midwives' perceptions	Baker et al.	*Midwifery*	2020	31
Experiences of maternity care in New South Wales among women with mental health conditions	Corscadden et al.	*BMC Pregnancy and Childbirth*	2020	34

Impact of a psychiatric nurse specialist as a liaison for pregnant women with mental disorders	Tsuji et al.	*The Tohoku Journal of Experimental Medicine*	2021	40
Mental health service use among pregnant and early postpartum women.	Lee-Carbon et al.	*Social Psychiatry and Psychiatric Epidemiology*	2022	28
Perinatal psychiatric practitioner consultation program delivers rapid response to OB/GYN practitioners	Doering et al.	*Birth: Issues in Perinatal Care*	2023	36
Utilization of digital prenatal services and management of depression and anxiety during pregnancy: A retrospective observational study	Rubin-Miller et al.	*Frontiers in Digital Health*	2023	39

Frame 2 – Summary of integrative review.

Source: Own data.

Three main categories emerged from the analysis of the articles: the perceptions and accounts of women with mental disorders about prenatal care; health workers' experiences and knowledge of mental health during pregnancy; and strategies and interventions for mental health during prenatal care. These categories are discussed below.

Perceptions and accounts of women with mental disorders about prenatal care

There is no shortage of discussions about the various issues experienced by pregnant women, but when these women have mental disorders, these questions are likely to be exacerbated. Issues such as fear of the return of symptoms, unfavorable outcomes for the child, lack of knowledge about health services and protocols, and unfamiliar health workers permeate the entire period of pregnancy. Therefore, according to the discussions presented in the reviewed articles, it is important to investigate and present what women themselves say.

In one study, Anke et al.[22] reported on how women with bipolar disorder spoke about the risk of relapse. They mentioned fear of the unknown, impacts on the child's development, cases of postpartum psychosis, the impact on their partner's life, and the recurrence of depression. The study also found that women who were more worried tended to be more active in looking for ways to deal with the situation. However, as the authors highlight, it is important to also pay attention to women that display low levels of worry, as well as and those who worry a lot but do not have the resources they need, like family or partner(s) to support them and access to professional/health services.

One of the study participants[22] reported that such fears had influenced her decision to become a mother for years. Alderdice[36] highlights the need for frank discussions with women about their contraceptive options and reproductive choices. Above all, the professionals involved in prenatal care must be able to recognize and support these strategies and provide whatever resources women need to feel less vulnerable.

Phillips and Thomas[26] investigated the expectations and experiences of women with pre-existing mental disorders at their first prenatal appointment. Similar to the results mentioned above, the participants in this study also reported fear and concerns regarding motherhood but were willing to openly share their mental health diagnoses with the professionals. Differently, Baker et al.[31] and Bayrampour et al.[33] report that issues such as insecurity, fear of possible consequences, and stigma towards mental health issues discourage some women from openly discussing their mental health. It is noteworthy that, in the study by Phillips and Thomas[26], the women criticized the volume of information they received and questions they were asked during the first appointment, and they also indicated they would like the change to discuss their mental health in more detail.

Phillips and Thomas[26] also found that although some women were satisfied with the opportunity to discuss their mental health needs, some reported that they saw different midwives throughout their pregnancy, which hindered their ability to establish a bond of trust with these professionals. The bond between midwives and pregnant women is of the utmost importance. Woman-centered care, with an approach that incorporates psychological aspects and uses active listening, can foster women's autonomy in the perinatal period[37].

It is worth mentioning that Baker et al.[31] emphasize the importance of considering the woman's cultural context when addressing mental health issues. Some cultures may interpret symptoms related to mental disorders differently and may not provide a safe space for women to discuss them.

Gender roles in different cultures, in addition to factors such as immigration, religion, and socioeconomic status, have a significant impact on the mental health of these women[38,39]. This reinforces the need for the delivery of mental health care to take account of these factors. As mentioned by Xiao et al.[40], strategies targeting mental health education, family, and community can benefit women from culturally sensitive contexts, who often face both self-stigma and social stigma, hindering their ability to discuss their mental health.

As observed by Darling and Viveiros[30], connecting with their health worker was important for women to feel at ease talking about their mental health. The authors also noted an abundance of services and protocols for children, but a shortage of services aimed at maternal well-being. Furthermore, the study participants reported having difficulty finding mental health services and adhering to treatments, especially when their own mental resources were drained by the added demands of motherhood.

Mental health should be monitored throughout the different stages of life, especially during the perinatal period. Proper referral to mental health specialists is essential for the early identification of risks and improved quality of life for women at this time. In the study conducted by Kingston et al.[25], women reported a range of factors that acted as barriers to screening. These included the influence of their support network, with people often telling them that what they were feeling was normal; the belief that they could deal with their feelings on their own; their preference for discussing mental health issues with their support network; and ignorance about what emotions are normal during pregnancy. It was also found that women who had not had psychiatric treatment before were more likely to try to deal with their mental health issues alone.

In another study, Bayrampour et al.[33] found that there was no consensus among their study participants when asked about what their preferred mental health screening approach would be. Those who had a preference for a less interactive approach justified their decision saying that it would give them more time to think and provide better answers. However, the women with previously diagnosed mental disorders expressed a preference for a communicative approach, highlighting benefits such as the possibility of bonding with the professional, communicating their emotions, and better understanding their feelings, which is in line with the results of Kingston et al.[25]. However, some women expressed fear of the possible consequences of speaking openly with health workers, including fear that the social services would be involved and fear of judgment[33].

As for referral to specialized services, Darwin et al.[23] reported that the women from their study felt comfortable with referrals, but reported difficulties in communicating with the professionals and in adhering to care, especially their postpartum appointments. The researchers also found that notes made by health workers in previous consultations were not always clear, so the specialists did not always have a clear idea of the women's history. Similar difficulties with continuity of care were also reported by Corscadden et al.[34] and Phillips and Thomas[26], who reinforced the importance of monitoring for mental health to occur continuously throughout pregnancy and post partum.

Health workers' experiences of and knowledge about mental health during pregnancy

Prenatal care for women with mental disorders requires health workers to be adequately trained and attentive to their needs. The siloed mentality of certain medical specialists/specialties can hinder the development of a broader view of the needs and reality of these women. Therefore, analyzing the experiences and knowledge of the various professionals who care for these women could indicate potential gaps and also potential areas where action could be taken to improve this care.

The study by Adjorlolo et al.[20] addressed the involvement of nurses and midwives in promoting maternal mental health in their routine care. The results showed that general nurses were more likely to ask the women about their mental health. The researchers also found that the professionals' knowledge about the women's mental health was the most significant and consistent predictor of professional engagement in promoting their mental health. Another important point raised by the nurses and midwives was that they wanted more information on the subject, particularly on personality disorders, bipolarity, and psychotics, in addition to training in therapeutic communication and psychosocial interventions. Similar findings were reported by Viveiros and Darling[30], in that the professionals they spoke to also mentioned the importance of training, and that the shortage of health workers resulted in long waiting lists for specialized care.

In a bid to contribute to the dialogue on the training of professionals in maternal mental health, Phillips[24] focused specifically on how much midwives in training knew about mental disorders in the perinatal period. She found that overall, the students were aware of the possible unfavorable maternal and neonatal outcomes and were mindful of women's different cultural contexts. In contrast, Patabendige et al.[41] found that the various professionals who participated in their study had little knowledge of specific care for women with mental disorders; however, they did have satisfactory general knowledge about the possible pregnancy outcomes in such women.

In another study, Baker et al.[31] focused specifically on midwives and the potential barriers and facilitators of mental health screening during pregnancy. They also explored the use of the Whooley questions, which are part of the UK's National Health Service recommendations for the management of mental health in the perinatal period. The questions are: "During the past month, have you often been bothered by feeling down, depressed or hopeless?" and "During the past month, have you often been bothered by little interest or pleasure in doing things?" The results showed that the professionals considered the Whooley questions restrictive, and that the first consultation may not be the best time to ask them, as the early symptoms of pregnancy, especially fatigue and nausea, may serve as confounders for the women, making it harder for them to identify and explore their own mental health symptoms and needs. While the midwives reported recognizing the importance of the questions, they did not feel capable of resolving or dealing with the answers and demands that might arise, and would probably refer these women to other specialists.

Regarding communication between professionals from different specialties, the study conducted by Doering et al.[35] aimed to describe the use of a practitioner-to-psychiatrist consultation program for obstetricians and gynecologists. Most of the inquiries were related to the continuity of pharmacological care and the signs and symptoms of depression and anxiety. Although the service was initially aimed at doctors, it was also used by midwives and nurses, and all the health workers felt psychiatric consultations would make their patient care more effective.

Phillips and Thomas[26] reiterated the need for greater collaboration and communication among different specialties. They found that it was not enough for a professional to address mental health during consultations if they were not properly trained and the care team was not clear about the healthcare flows. Overall, the women felt let down when they were not given answers to questions they had about the services provided by specialized centers.

When health workers manage to engage effectively with women, possible warning signs can be picked up more easily, whereas some signs or symptoms that are less obvious may be missed if the health workers' approach is not effective. Health workers' communication approach when administering assessment tools is a significant topic of reflection in the development of these approaches. Rollans et al.[29], for example, observed that when the midwives in their study assumed a relaxed, flexible manner when asking questions, the women tended to be more at ease answering them. Conversely, when they took a more directive, structured approach and kept looking at the computer screen to read the questions, the women were less open in their answers. The sensitivity, care, and confidence conveyed by health workers were also mentioned by Kingston et al.[25], who reported that these characteristics could facilitate and optimize the screening and monitoring of maternal mental health.

In general, based on the analysis of the studies, we can see that health workers recognize the importance of caring for and checking in on women's mental health during pregnancy. However, there is a gap in these workers' training, and they may therefore not feel adequately prepared to handle and refer potential cases correctly.

Strategies and interventions for mental health during prenatal care

Over the years, and with the development of protocols by different health systems, it has become clear that different strategies are needed for the effective care of women with mental disorders during pregnancy. The following discussion seeks to identify the main factors that can affect the implementation of these strategies and to describe some strategies analyzed by different researchers.

Lee-Carbon et al.[28] analyzed the contact women with mental disorders had with mental health services during pregnancy and post partum. Overall, only 34% of the women who had a diagnosed mental disorder contacted the mental health services. In addition, the authors found that when women did contact these services, it tended to be associated with a perceived need for social support, previous admissions to psychiatric services, and moderate to severe cases of depression, according to the Edinburgh Postnatal Depression Scale.

Lee-Carbon et al.[28] also observed that women with a larger support network were less likely to seek support from mental health services, and that partners and/or family members were important in encouraging them to get professional help when needed. This indicates that strategies for prenatal care for women with mental disorders should include their support network, and these people should be informed about possible signs and symptoms, so that women are more likely to ask for professional help when they need it. It is worth noting that trust in prenatal care is important for women to understand the warning signs of mental health and thus for their mental health care at this time[42].

In a clinical trial, Noorbala et al.[19] provided their intervention group with psychotherapy strategies, an educational package, stress management training, and drug therapies. They reported improvements in the women's mental health in the third trimester of pregnancy, six weeks post partum, and six months post partum[19]. The authors concluded that psychological interventions have a positive impact on women's mental health during pregnancy and post partum, especially for women with a mental disorder prior to pregnancy.

In another study, Van Ravesteyn et al.[27] aimed to compare two groups: one of women from a multicomponent treatment group and the other of women receiving individual counseling (the usual treatment). They found that there were no significant differences in depressive symptom reduction or in obstetric outcomes. Meanwhile, in a randomized controlled study, Khamseh et al.[18] developed a problem-solving training intervention based on the IDEAL (Identify, Define, Explore, Act, Look back) model, in which both groups received routine prenatal care training and the intervention group also

received problem-solving skills training. They identified reduced depression scores in the intervention group, indicating that the use of problem-solving strategies associated with routine therapeutic care may be beneficial in the long run.

In the clinical trial conducted by Noorbala et al.[19], a set of interventions was implemented to promote mental health in pregnant women. The intervention group received training in various skills, including stress management, psychotherapy, health education, and drug therapy. The results revealed that these interventions had a positive impact on the women's mental health indicators, resulting in fewer complaints related to depression and anxiety.

Another strategy investigated was the use of telephone calls from psychiatric nurses to women with mental disorders who were pregnant.[43] The rates of referral to the health center were higher in the group of women who received the call. However, the time for referral to the psychiatrist was longer, but this was not prejudicial for the women, since the psychiatric nurses had multiple phone conversations with the women and chose the best time for their referrals, which also avoided overloading the psychiatrists. Apparently, this system yielded benefits for the women and the health workers.

The first option for many health workers is referral to a mental health specialist, which requires time and the availability of said professional. Looking into this issue, Doering et al.[35] and Marcus et al.[21] describe the use of systems that enable general practitioners to consult specialists. In general, this strategy yielded positive results, helping psychiatric symptom stabilization and management during pregnancy, and was also helpful for minimizing the long waiting lists for psychiatric care. In addition, it is important to emphasize that referrals must be conducted correctly. Referrals that are not based on appropriate criteria and/or do not adequately transmit the women's medical history could hamper the effectiveness of the service and its users[32].

Some studies highlight the importance of including and expanding on mental health information to be monitored routinely and included in pregnant woman's health records[25,43]. Although the Whooley questions are often used[23,24,28,31], particularly in the United Kingdom, health workers need to be qualified in how to interpret the answers. In this sense, we agree with Fontein-Kuipers and Jomeen[44], who argue that it would be beneficial for women for these questions to be asked throughout pregnancy, not just in the first appointment.

In terms of health technology, smartphone apps have become a constant presence for a variety of purposes, from scheduling appointments to receiving exam results, and recently they have been used for health monitoring. Thus, despite the risks of overexposure to non-evidence-based information and of personal data breaches, these apps offer the possibility of closer and more continuous health monitoring. In contexts where women are limited by, for example, an insufficient support network and long waiting times for appointments, these apps can promote greater engagement, trust, and access to health information.

Rubin-Miller et al.[42] present some interesting data on the use of a digital platform by pregnant women and the management of symptoms of depression and anxiety during pregnancy, and the improvement of this management through education and support. Of the more than 5,000 study participants, over half reported that the platform helped them recognize warning signs, and 49% reported that they were able to obtain accurate medical information about their symptoms. The authors also found that making more use of the tutorials and articles provided on the platform was associated with improvements in the women's management of their mental health during pregnancy.

In another technology-oriented study Kim et al.[45] addressed the use of computer-assisted cognitive-behavioral therapy by pregnant women diagnosed with major depressive disorder. Despite the positive results, such as good response to treatment and good frequency of sessions, the authors

were careful to stress the importance of individual evaluations to ensure each woman receives the most effective treatment. Another development in the field of technology for healthcare is the possible use of artificial intelligence (AI) in mental health screening or tracking[46]. However, precautions must be taken to avoid potential data breaches and AI models that are not adequately validated and/or overseen by qualified professionals.

Finally, a systematic review published in 2023[47] reiterated the importance of ensuring that prenatal care recommendations and strategies are woman-centered, flexible, and culturally adapted to their realities. It is imperative that barriers related to stigma and poor professional training are overcome.

CONCLUDING REMARKS

At the end of this review, it is clear that there is a need for more discussion on perinatal care for women with mental disorders in order to shed light on the challenges they face, both during pregnancy and in the early years after the birth of the child. Analyzing the lived experiences reported by these women is essential for reflecting on how best to provide a comprehensive approach that is not limited to physical symptoms. Furthermore, women themselves should have a voice and be heard in debates about care practices so that that their experiences are included in the development of healthcare strategies.

One clear finding is how important multidisciplinary care is for improving women's quality of life, promoting mental health education, and identifying warning signs for mental health during pregnancy and post partum. The integration and continuous development of all health workers is needed, ideally from as early as their initial training. Such training should reinforce the importance of individualized, inclusive, adaptable care that is not bound rigidly to institutional protocols, which may often fail to reflect the reality of the community in question. Furthermore, mental health and the identification of warning signs should be part of the care provided throughout pregnancy and not limited to asking a few questions at the first consultation. This is because as the bond between the health worker and the woman strengthens, the woman feels more confident and is more likely to share their mental-health-related issues.

Finally, our study found that the training of health workers who provide care for women during pregnancy and post partum should cover the women's cultural context, providing them with cross-cultural interaction and communication skills with a focus on diversity and empathy. It is hoped that health workers who receive such training will be able to deliver care in a way that makes women less fearful of being judged and more likely to share information about their mental health. One last hope is that the identification of these challenges will contribute to the development of effective strategies and the active participation of women in discussions about their own health needs.

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