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THE IMPORTANCE OF INTEGRATING PERINATAL MENTAL HEALTH CARE FOR THE EARLY IDENTIFICATION OF POSTPARTUM DEPRESSION

Thaiane Helen Gomes de Oliveira
Universidade Iguaçu (UNIG)
Rio de Janeiro-RJ
https://orcid.org/0009-0003-0387-5638

Mariana Beatriz Basso Macedo
Universidade do Oeste Paulista (UNOESTE)
Jaú-SP
https://orcid.org/0000-0003-4824-3258

Fernanda de Jesus Abrantes Kuriki
Universidade Cidade de São Paulo (UNICID)
São Paulo-SP
https://orcid.org/0009-0008-4641-9444

Laura Matos Freire Soncim
Universidade para o Desenvolvimento do
Alto Vale do Itajaí (UNIDAVI)
Rio do Sul-SC
https://orcid.org/0009-0004-4837-6688

Nayara Louredo Coelho Alves
Universidad Nacional de Rosario (UNR)
Rosario, Santa Fé - Argentina
https://orcid.org/0009-0004-8861-0272

Maria Laura Catharin
Universidade do Oeste Paulista (UNOESTE)
https://orcid.org/0009-0001-0461-2878

Amanda de Oliveira Jorge
Universidad Central del Paraguay (UCP)
Ciudad del Este
https://orcid.org/0009-0001-8955-4469

Sarah Catherine Cruz Andrade
Centro Universitário Zarns (Zarns)
Salvador
https://orcid.org/0000-0002-2788-8383

Rayssa Vitória da Silva Silvério Oliveira
Universidade Federal de Juíz de Fora -
Campus Governador Valadares (UFJF-GV)
Governador Valadares - MG
https://orcid.org/0009-0005-1409-8998

Gleice Mara Alves Nunes
Universidade de Mogi das Cruzes - UMC
Mogi das Cruzes - SP
https://orcid.org/0009-0005-7487-2578

Analu Ferreira de Souza Schuber
Universidade Federal da Integração Latino-
Americana, Foz do Iguaçu - PR
https://orcid.org/0009-0006-6739-3840

Neidejany de Assunção do Sacramento
Universidad Nacional de Rosario (UNR)
Rosario, Santa Fé - Argentina
https://orcid.org/0000-0001-7050-6697

Abstract: Postpartum depression (PPD) is a prevalent complication that impacts maternal mental health and family well-being. This study reviewed strategies for integrating perinatal mental health care for early identification and management of PPD, highlighting interventions based on systematic screening, psychosocial support and therapies such as cognitive-behavioral therapy (CBT). Twenty-nine articles published between 2020 and 2024 in the PubMed database were selected, showing the effectiveness of the Edinburgh Postnatal Depression Scale (EPDS) and integrated approaches in reducing depressive symptoms and improving maternal quality of life. The findings indicate that barriers such as stigma, unequal access to care and lack of infrastructure limit the implementation of effective models, especially in vulnerable populations. Culturally adapted strategies, psychoeducation programs and cognitive-behavioral mindfulness emerge as promising tools, but require further validation. It is concluded that the integration of perinatal mental health care is essential to prevent the progression of PPD and mitigate its impacts on the mother, the newborn and the family. Public policies, professional training and investment in research are essential to overcome barriers and promote more equitable and inclusive care.

Keywords: postpartum depression, perinatal mental health, screening, cognitive-behavioral therapy.

INTRODUCTION

Perinatal depression, including postpartum depression (PPD), is one of the most prevalent complications of the pregnancy-puerperium cycle, significantly affecting the mental health of women and the well-being of their families. According to Golapan *et al.* (2022), approximately one in seven women experience symptoms of PPD, a condition that has been exacerbated during the COVID-19 pandemic due to increased maternal mortality. These impacts include serious psychological consequences for the mother, such as an increased risk of suicide, and impaired emotional and cognitive development of the child (Golapan *et al.*, 2022). Screening tools, such as the Edinburgh Postnatal Depression Scale (EPDS), are widely recommended for the early identification of PPD. However, their application is limited by barriers such as inconsistencies in protocols and lack of communication between health providers, as highlighted by Tyokighir *et al.* (2022). In addition, racial minority and low-income women face significant challenges in accessing care, which reinforces the inequality in adherence to mental health programs (Tyokighir *et al.*, 2022). The impact of postpartum depression extends beyond the maternal implications, compromising the mother-child relationship and child development. According to Suryawanshi IV and Pajai (2022), factors such as neuroendocrine changes, low self-esteem and insufficient social support are determining factors in the prevalence of PPD. Despite the effectiveness of pharmacological and psychotherapeutic interventions, stigma and lack of access to adequate treatment remain significant challenges (Suryawanshi IV; Pajai, 2022). Recent studies emphasize the need for more comprehensive and integrated screening. Kroll-Desrosiers *et al.* (2021) point out that only 40% of female veterans receive adequate screening, indicating the relevance of multidisciplinary approaches to mitigate the risks associated with perinatal depression. This gap reinforces the importance of care models that combine early screening and referral to specialized treatment (Kroll-Desrosiers *et al.*, 2021). The integration of care is also advocated by Dagher *et al.* (2021), who highlight the influence of socioeconomic and racial factors on the prevalence and treatment of perinatal depression. Only 15% of women in the US receive adequate treatment for this condition, reinforcing the need for integrated models that promote equity in access to care (Dagher *et al.*, 2021). Finally, the fragmentation of health services and the lack of standardization in screening protocols are challenges pointed out by Johnson *et al.* (2021). Interventions based on systematic screening and on-site mental health consultations have been shown to be effective in reducing complications and improving outcomes for mothers and children (Johnson *et al.*, 2021). According to Sidebottom *et al.* (2021), such strategies can contribute to the universalization of screening, especially in more vulnerable populations, promoting greater equity in access to care (Sidebottom *et al.*, 2021). According to Kroska and Stowe (2020), postpartum depression represents one of the most significant challenges in the field of perinatal mental health, affecting between 10% and 15% of women. This condition is often underdiagnosed due to a lack of social support and the stigma surrounding mental health, hindering early identification and effective treatment. Interventions such as cognitive-behavioral therapy and the use of medications such as SSRIs have shown efficacy, but gaps in access and management of the condition still persist, indicating the need for more integrated approaches (Kroska; Stowe, 2020). Based on these contexts and challenges, this article seeks to investigate the effectiveness of an integrated early intervention model for postpartum depression, evaluating its impacts on mental health and patient satisfaction, as well as the results achieved in terms of equity in care.

METHODOLOGY

This is a literature review developed according to the criteria of the PVO strategy, which stands for: population or research problem, variables and outcome. This strategy was used to develop the research question "How does the integration of mental health care influence the early identification and effective treatment of postpartum depression?". The searches were carried out using the PubMed - MEDLINE (Medical Literature Analysis and Retrieval System Online) databases. The search terms were used in combination with the Boolean terms "AND", "OR" or "NOT" (mention which operators were used), using the following search strategy: (perinatal) AND (mental health) AND ("postpartum depression") AND (treatment). From this search, 312 articles were found, which were then submitted to the selection criteria. The inclusion criteria were: articles in English; published between 2020 and 2024 and which addressed the themes proposed for this research, studies of the bibliographical review type and observational studies. The exclusion criteria were: duplicate articles, articles available in abstract form, articles that did not directly address the proposal studied and articles that did not meet the other inclusion criteria. After applying the search strategy to the database, a total of 41 articles were found. After applying the inclusion and exclusion criteria, 29 articles were selected from the PubMed database to make up this study's collection.

DISCUSSION

Mental health, according to the WHO, consists of a state of well-being, so that the individual is able to manage daily stress and work productively. Depression, in turn, consists of a mood disorder characterized by the presence of sadness and loss of interest, and when this disorder manifests itself in the perinatal period, that is, during pregnancy and twelve months after childbirth, it is called perinatal depression, while when it occurs in the first two or more weeks after childbirth, it is called postpartum depression (PPD) (Tripathy, 2020; Lim, 2021).

These concepts are important in the context of postpartum care, so much so that the American College of Obstetricians and Gynecologists (ACOG) brings up the concept of the "fourth trimester" as a mental health challenge, and, like the National Institute for Health and Care Excellence (NICE), recommends screening for PPD at least once during the perinatal period for pregnant women with symptoms of depression and anxiety (Lim, 2021; Gopalan *et al.*, 2022). In 2019, the US Preventive Services Task Force (USPSTF) recommended (grade B) interventions to prevent PPD, such as cognitive-behavioral therapy (CBT) and interpersonal therapy, but applicability still faces obstacles in the routine of professionals and in the form of prevention in vulnerable individuals (Lewis Johnson *et al.,* 2020).

According to Chen *et al.* (2011), intervention programs that integrate perinatal mental health and universal screening, such as the use of the Edinburgh Postnatal Depression Scale (EPDS), have shown significant efficacy in reducing depressive symptoms. However, limited adherence due to cultural stigmas and barriers reinforces the need for culturally adapted approaches to maximize positive outcomes (Chen *et al.*, 2011). Gopalan *et al.* (2022) corroborate this view by emphasizing that multidisciplinary team-based models are

essential for overcoming barriers to access and adherence, particularly in vulnerable populations. These strategies have proven crucial for integrating psychosocial support and therapeutic interventions into obstetric care (Gopalan *et al.*, 2022).

All this concern is based on the process of transition to motherhood, which involves a series of changes that put pregnant women at risk of mental health problems, affecting not only the mother, but also the developing child, the whole family and leading to relationship breakdowns (Tripathy, 2020). PPD is associated with an increase in events such as pre-eclampsia, premature birth, low birth weight, developmental deficits, reduced breastfeeding and child malnutrition (Tripathy, 2020; Wakefield; Frasch, 2023). Lewis Johnson *et al.* (2020) and Yasuma *et al.* (2020) also point out that PPD contributes to the prevalence of maternal mortality due to suicide and opioid abuse, especially when associated with a history of major depression, domestic violence and substance abuse.

The risk factors that predispose to PPD are numerous, among which a history of maternal depression, excessive stress, lack of social support, poorly performed prenatal care, inadequate eating habits, alcohol consumption and addictions to tobacco or illicit drugs, associated with hormonal imbalances, are highlighted as predisposing to the development of PPD (Yasuma *et al.*, 2020; Thiele *et al.*, 2023). These conditions are seen especially in pregnant women in situations of economic vulnerability and in low-income countries, because they have greater difficulty accessing medical care and have less social support, which, according to studies, could reduce prenatal depression by 22% (Tripathy, 2020; Ayrout *et al.*, 2024).

Schwank *et al.* (2020) point out that preventive interventions applied in an integrated way in obstetric health services have benefits for both maternal and neonatal outcomes.

However, financial and structural challenges, especially in low- and middle-income countries, continue to limit the effective implementation of these programs, which requires greater government investment and adaptation to local contexts.

Eastwood *et al.* (2021) add that social inequalities in access to perinatal care amplify disparities in the prevalence of PPD in marginalized populations. This scenario highlights the need for targeted interventions that address the specific needs of these communities, taking into account cultural and economic barriers (Eastwood *et al.*, 2021).

Reducing prenatal depression is important for the prevention of PPD, so much so that a prospective cohort study carried out at the Obstetrics University Hospital in Damascus City showed a significant association between the rate of prenatal depression and its impact on the development of PPD, even serving as a predictor for the disease (Ayrout *et al.*, 2024). Another important factor, according to Lim (2021), is labor pain, perinatal pain, analgesia, as well as acute childbirth events, which have been linked in observational studies to a higher risk, not only of developing the disease, but also of its progression. This theory still finds conflicting results in similar studies, but the authors stress that it is up to the anesthesiologist to consider screening and appropriate referral in conjunction with the obstetrician (Lim, 2021).

Despite the fact that studies show the harmful risks of PPD, diagnosis and appropriate treatment still fall short of what is needed. Part of this is due to the stigma attached to mental health by pregnant women and the difficulty in accessing perinatal mental health services, with professionals able to recognize the disorder (Tripathy, 2020; Thiele *et al.*, 2023). With regard to stigma, prejudice and fear of judgment, a randomized clinical trial carried out in Japan showed that there was less of a barrier to access when offering pregnant women

mobile health services via the mHealth app (Arakawa *et al*., 2023). On the other hand, as far as diagnosis is concerned, screening models have emerged as useful tools in this process and it is also recognized that, according to studies, the prenatal period is conducive to carrying out tests because it is a period of constant monitoring (Tripathy, 2020; Costa *et al*., 2021; Tabb *et al*., 2022; Wagas *et al*., 2022).

In this context, the last few decades have been marked by advances in the development of universal and effective screening for depression and anxiety, in order to identify and intervene early in pregnant women at greater risk of developing PPD, with a view to preventing this event from happening or mitigating its deleterious effects (Tabb *et al*., 2022; Wagas *et al.*, 2022). The mixed-methods systematic review and meta-analysis sought to bring together screening programs for depression and anxiety, such as the Edinburgh Postnatal Depression Scale (EPDS) and the 9-item Patient Health Questionnaire (PHQ9), in order to compare the effectiveness of the use of screening in the favorable outcome of improved maternal and infant mental health (Wagas *et al*., 2022).

Although national and international organizations around the world highlight the ethical implications of screening programs, due to the lack of treatment provision, treatment strategies have been based on these trials, such as non-directive counselling, psychoeducation and pharmacological therapy (Wagas *et al*., 2022). In this sense, psychoeducational intervention based on cognitive-behavioral therapy, with or without a biofeedback system, has had its effectiveness evaluated by a randomized study protocol, MAMH@WORK, which adopts an integrated approach, ranging from the mother-child relationship, child behavior to return to work (Costa *et al*., 2021).

It is true that any interventions should be conducted by competent specialists and, al-though psychological interventions are the most promising in preventing PPD, especially culturally adapted ones (Yasuma *et al*., 2020; Jidong *et al*., 2021), the start of any treatment should be discussed with the pregnant woman beforehand, both with regard to the options available and the risks and benefits. This is because approaches that validate feelings and emphasize maternal and neonatal benefits are more successful (Tripathy, 2020; Tabb *et al.*, 2022).

Some techniques have been studied, such as PREPP (Practical Resources for Effective Postpartum Parenting), which is a preventive intervention that provides care techniques to reduce the baby's crying and fussiness, self--reflection skills, mindfulness and psychoeducation about the postpartum period, and MBCT, which is a group intervention based on mindfulness cognitive-behavioral therapy (MBCT) via videoconference. The first technique proved to be effective in reducing depressive symptoms, but not anxiety, while the second technique, more effective in mild to moderate symptoms of depression, showed results that suggest an improvement in the total EPDS score (Latendresse *et al*., 2021; Grubb *et al.*, 2024). Incidentally, the study by Lee-Carbono et al. (2022) indicated that women with moderate to severe depressive symptoms on the EPDS were more likely to contact mental health services from pregnancy to the first postpartum trimester.

Finally, other mental health problems such as anxiety, psychosis and alcohol or drug abuse should be the subject of further studies and the development or expansion of prenatal screening, as well as the need for public policies and training for professionals in perinatal mental health, so that early diagnosis and treatment can be carried out, preventing the onset and progression to PPD (Tripathy, 2020; Lautarescu *et al*., 2022; Lee-Carbono et al., 2022; Wagas *et al*., 2022).

FINAL CONSIDERATIONS

The integration of perinatal mental health care has emerged as an indispensable approach to the early identification and management of postpartum depression (PPD). This study highlighted the relevance of intervention models that incorporate systematic screening, psychosocial support and evidence-based therapies, such as cognitive-behavioral therapy (CBT) and the use of the Edinburgh Postnatal Depression Scale (EPDS). These strategies have been shown to be effective in reducing depressive symptoms and improving the quality of life of women in the perinatal period.

However, barriers such as cultural stigmas, inequalities in access to care and a lack of adequate infrastructure still pose significant challenges to the implementation of these models. Vulnerable populations, such as low-income women and racial minorities, remain disproportionately affected, reinforcing the need for public policies that prioritize equity in access to perinatal mental health services.

The findings also highlight the importance of culturally adapted interventions and training multidisciplinary teams to deal with the particularities of each context. Strategies such as psychoeducation programs, PREPP, and cognitive-behavioral mindfulness have shown promise, but require greater standardization and validation in future studies.

Finally, the integration of mental health care into perinatal care is essential to prevent the progression of PPD and mitigate its deleterious impacts on the mother, the newborn and the family nucleus. Investments in research, professional training and public policies are key to overcoming existing barriers and promoting comprehensive and accessible care. This transformative approach is a crucial step towards improving maternal and child mental health outcomes, contributing to building more equitable and inclusive health systems.

REFERENCES

ARAKAWA, Yuki *et al*. Effectiveness of mHealth consultation services for preventing postpartum depressive symptoms: a randomized clinical trial. **BMC Medicine**, v. 21, n. 1, p. 221, 2023.

AYROUT, Ramah Abdo *et al*. Exploring prenatal depression and postpartum depression: Findings from a prospective cohort study at University Hospital Obstetrics in Damascus. **Medicine**, v. 103, n. 20, p. e38170, 2024.

CHEN, Helen *et al*. Identifying mothers with postpartum depression early: integrating perinatal mental health care into the obstetric setting. **International Scholarly Research Notices**, v. 2011, n. 1, p. 309189, 2011.

COSTA, J. *et al*. Maternal Mental Health in the WORKplace (MAMH@WORK): A protocol for promoting perinatal maternal mental health and wellbeing. **International Journal of Environmental Research and Public Health**, v. 18, n. 5, p. 2558, 2021.

DAGHER, Rada K. *et al*. Perinatal depression: Challenges and opportunities. **Journal of Women's Health**, v. 30, n. 2, p. 154-159, 2021.

EASTWOOD, John *et al*. Psychosocial stratification of antenatal indicators to guide population-based programs in perinatal depression. **BMC Pregnancy and Childbirth**, v. 21, p. 1-12, 2021.

GOPALAN, P. *et al*. Postpartum depression—identifying risk and access to intervention. **Current Psychiatry Reports**, v. 24, n. 12, p. 889-896, 2022.

GRUBB, Myrriam D. *et al*. Practical resources for effective postpartum parenting (PREPP): a randomized controlled trial of a novel parent-infant dyadic intervention to reduce symptoms of postpartum depression. **American Journal of Obstetrics & Gynecology MFM**, v. 6, n. 12, p. 101526, 2024.

JIDONG, Dung Ezekiel *et al.* Psychological interventions for maternal depression among women of African and Caribbean origin: a systematic review. **BMC Women's Health**, v. 21, p. 1-14, 2021.

JOHNSON, Amber *et al.* Systematic screening for perinatal mood and anxiety disorders to promote onsite mental health consultations: A quality improvement report. **Journal of Midwifery & Women's Health**, v. 66, n. 4, p. 534-539, 2021.

KROLL-DESROSIERS, A. *et al.* Exploring the extent of perinatal depression screening in the health records of veterans. **Administration and Policy in Mental Health and Mental Health Services Research**, v. 48, n. 4, p. 608-618, 2021.

KROSKA, Emily B.; STOWE, Zachary N. Postpartum depression: identification and treatment in the clinic setting. **Obstetrics and Gynecology Clinics**, v. 47, n. 3, p. 409-419, 2020.

LATENDRESSE, Gwen *et al.* A group videoconference intervention for reducing perinatal depressive symptoms: A telehealth pilot study. **Journal of Midwifery & Women's Health**, v. 66, n. 1, p. 70-77, 2021.

LAUTARESCU, Alexandra *et al.* The factor structure of the Edinburgh Postnatal Depression Scale among perinatal high-risk and community samples in London. **Archives of Women's Mental Health**, p. 1-13, 2022.

LEE-CARBON, Leonie *et al.* Mental health service use among pregnant and early postpartum women. **Social Psychiatry and Psychiatric Epidemiology**, v. 57, n. 11, p. 2229-2240, 2022.

LEWIS JOHNSON, Tamara E. *et al.* Preventing perinatal depression now: a call to action. **Journal of Women's Health**, v. 29, n. 9, p. 1143-1147, 2020.

LIM, Grace. Perinatal depression. **Current Opinion in Anesthesiology**, v. 34, n. 3, p. 233-237, 2021.

SCHWANK, Simone Eliane *et al.* Mental health of Urban Mothers (MUM) study: a multicentre randomised controlled trial, study protocol. **BMJ Open**, v. 10, n. 11, p. e041133, 2020.

SIDE BOTTOM, Abbey *et al.* Perinatal depression screening practices in a large health system: identifying current state and assessing opportunities to provide more equitable care. **Archives of Women's Mental Health**, v. 24, p. 133-144, 2021.

SURYAWANSHI IV, Om; PAJAI, Sandhya. A comprehensive review on postpartum depression. **Cureus**, v. 14, n. 12, 2022.

TAB B, Karen M. *et al.* Patient engagement to examine perceptions of perinatal depression screening with the capabilities, opportunities, motivation, and behaviors (COM-B) model. **Frontiers in Health Services**, v. 2, p. 845441, 2022.

THIELE, Grace A.; RYAN, Deirdre M.; OBERLANDER, Tim F.; HANLEY, Gillian E. Can we more precisely classify exposure to antenatal depression and anxiety in multivariable prediction models of pregnancy and birth outcomes: a population-based cohort study. **BMC Psychiatry**, v. 23, n. 1, p. 803, 2023.

TRIPATHY, Priyadarshini. A public health approach to perinatal mental health: Improving health and wellbeing of mothers and babies. **Journal of Gynecology Obstetrics and Human Reproduction**, v. 49, n. 6, p. 101747, 2020.

TYOKIGHIR, D. *et al.* Qualitative assessment of access to perinatal mental health care: A social-ecological framework of barriers. **Kansas Journal of Medicine**, v. 15, n. 1, p. 48–54, 2022.

WAKEFIELD, Colin; FRASCH, Martin G. Predicting patients requiring treatment for depression in the postpartum period using common electronic medical record data available antepartum. **AJPM Focus**, v. 2, n. 3, p. 100100, 2023.

WAQAS, Ahmed *et al.* Screening programs for common maternal mental health disorders among perinatal women: report of the systematic review of evidence. **BMC Psychiatry**, v. 22, n. 1, p. 54, 2022.

YASUMA, Naonori *et al.* Antenatal psychological intervention for universal prevention of antenatal and postnatal depression: A systematic review and meta-analysis. **Journal of Affective Disorders**, v. 273, p. 231-239, 2020