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RESEARCH ARTICLE (ORIGINAL)

Promotion of maternal mental health in the perinatal period: Prototype of a primary health care intervention program

Promoção da saúde mental materna perinatal: Protótipo de curso de intervenção em cuidados de saúde primários

Promoción de la salud mental materna perinatal: Prototipo de curso de intervención en cuidados de salud primarios

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Abstract
Background: National and international studies underscore the need to promote maternal mental health during the transition to motherhood. Mental disorders during this period affect mothers, fathers, and developing children, thus constituting a public health problem.
Objective: To develop a prototype program to promote maternal mental health in the perinatal period in primary health care settings.
Methodology: Qualitative, descriptive study using three focus groups (*N* = 29): Pregnant women and their partners; Mothers and their partners with children up to 12 months of age; and Primary health care professionals. Data were transcribed and analyzed using inductive thematic analysis and *NVivo-12* software. All ethical requirements were met.
Results: The components of the prototype program for the promotion of maternal mental health in primary health care settings were identified based on participants' reports of maternal emotional experiences, perceived risk and protective factors of maternal mental health, and suggested themes. The prototype program includes the development of eight themes, from pregnancy to postpartum up to 12 months.
Conclusion: Our study has contributed to the development of a prototype program for the promotion of maternal mental health in the perinatal period in primary health care settings.

Keywords: mental health; health education; perinatal care; focus groups

Resumo
Enquadramento: Estudos nacionais e internacionais evidenciam a necessidade de promoção da saúde mental materna (SMM) na transição para a maternidade. As perturbações mentais deste período afetam mães, pais e filhos em desenvolvimento tornando-se um problema de saúde pública.
Objetivo: Desenvolver um protótipo de curso de promoção da SMM no período perinatal, para contextos de Cuidados de Saúde Primários (CSP).
Metodologia: Estudo qualitativo, descritivo, com três grupos focais (*N* = 29): grávidas e companheiros; mães e companheiros, com filhos até 12 meses; profissionais de saúde dos CSP. Informação transcrita, analisada por análise temática indutiva com recurso ao NVivo-12. Cumpridos pressupostos éticos.
Resultados: A partir das vivências emocionais maternas, fatores de risco e protetores percecionados e sugestões de áreas temáticas, foram identificadas as componentes do protótipo integrando oito áreas temáticas a serem desenvolvidas no Curso de promoção da SMM, em contexto de CSP, na gravidez e pós-parto, até 12 meses.
Conclusão: Este estudo contribuiu para o desenho do protótipo de um curso de promoção da SMM em CSP, no período perinatal.

Palavras-chave: saúde mental; educação para a saúde; assistência perinatal; grupos focais

Resumen
Marco contextual: Estudios nacionales e internacionales destacan la necesidad de promover la salud mental materna (SMM) en la transición a la maternidad. Los trastornos mentales en este periodo afectan a madres, padres y niños en desarrollo, lo que lo convierte en un problema de salud pública.
Objetivo: Desarrollo de un prototipo de curso de promoción de la SMM en el periodo perinatal, para entornos de Cuidados de Salud Primarios (CSP).
Metodología: Estudio cualitativo y descriptivo con tres grupos de discusión (N = 29): mujeres embarazadas y sus parejas; madres y sus parejas con hijos de hasta 12 meses; profesionales sanitarios de los CSP. Información transcrita, analizada mediante análisis temático inductivo con el NVivo-12. Cumplidos los requisitos éticos.
Resultados: A partir de las experiencias emocionales maternas, los factores de riesgo y protección percibidos y las sugerencias de áreas temáticas, se identificaron los componentes del prototipo, que integran ocho áreas temáticas a desarrollar en el curso de promoción de la SMM en un contexto de CSP en el embarazo y posparto, hasta los 12 meses.
Conclusión: Este estudio contribuyó al diseño de un prototipo de curso para promover la SMM en CSP en el periodo perinatal.

Palabras clave: salud mental; educación sanitaria; atención perinatal; grupos de discusión

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Introduction

Over the past few years, the mental health of women in the reproductive phase has attracted the attention of the scientific community, due to the need to deepen the understanding of the issues related to maternal mental health (MMH) and to design appropriate responses from health professionals during the perinatal period.

Perinatal mental health as a clinical and research area has led to a paradigm shift. The focus of analysis, which was limited to the immediate pre- and postpartum periods, now includes the complex biological, emotional, and social changes that occur from conception to the first year after birth (Macedo & Pereira, 2014). This perspective is supported by the International Marcé Society and the World Psychiatric Association ([WPA] 2017).

The complexity of this period can lead to evolution and development, but it can also be a risk due to the difficulties involved. Colman and Colman (1994) state that the transition to motherhood can be ". . . smooth or violent, a source of confidence or anxiety, happy or sad, but it is certainly change" (p. 31). It is a process that extends beyond pregnancy, as motherhood requires ". . . a constant adjustment between expectations and realities" (Colman & Colman, 1994, p. 178). According to these authors, this new experience also involves permanent changes that demand flexibility and the ability to adapt to all the changes and losses.

At this stage, MMH is crucial and refers to how all these changes are processed, experienced, and incorporated by the woman in the transition to motherhood. Aspects such as personality traits, conjugal, family, and social support, the meaning of pregnancy, and the motherhood project are considered determining factors in how women experience the transition process. Based on the first author's master's thesis, our study aims to develop a prototype program to promote MMH in the perinatal period in primary health care (PHC) settings.

Background

Some healthcare settings neglect MMH as a component of reproductive health despite its impact as a disease and disability. The World Health Organization [WHO] has called for the importance of mental health problems to be recognized in reproductive health programs as well as for the inclusion of this dimension in care delivery (WHO, 2009).

Published studies confirm that perinatal mental illness is a health problem prevalent in many countries and is considered a public health issue (Haga et al., 2018; Tripathy, 2020). Review studies estimate that approximately 20% of pregnant women experience symptoms of depression, with 15% experiencing major depression (Yin et al., 2021). During the postpartum period, the estimated incidence of depression is approximately 17% (Wang et al., 2021). Adjustment and anxiety disorders are even more common, with up to one-third of women estimated to experience anxiety disorders during pregnancy and 20% during the postpartum period (Harvey et al., 2018).

Since the 1980s, anxiety has been confirmed as the most common condition in pregnancy, and depression is one of the most serious perinatal disorders (Camarneiro & Justo, 2020). These conditions are associated with obstetric complications, including preterm birth, compromised parenting, risk of parental conflict and relationship breakdown, insecure attachment, compromised mother-baby relationship, and changes in the child's neurocognitive and behavioral development (Camarneiro & Justo, 2020; Tripathy, 2020).

The global burden of MMH-related illness confirms the urgent need to promote health policies in this area to design specialized and preventive responses, as well as provide access to early diagnosis and treatment, to which all women should be entitled (Tripathy, 2020).

The WPA (2017) identifies mental disorders as prevalent health issues during pregnancy and the first year after birth (the perinatal period) and has issued a global statement alerting to this problem. In this statement, dated March 8, 2017, the WPA established 12 recommendations for health professionals, policymakers, and relevant agencies to develop strategies to promote MMH and reduce maternal and infant morbidity and mortality (WPA, 2017).

These strategies should be implemented in PHC settings and, whenever possible, by a multidisciplinary team (Marques et al., 2014; Nagle & Farrelly, 2018; Tripathy, 2020). Highlight is also given to the development of public campaigns to disseminate information and raise awareness, combat stigma, and promote MMH literacy (Nagle & Farrelly, 2018; Tripathy, 2020).

Research question

What are the components of a prototype program to promote maternal mental health in the perinatal period in primary health care?

Methodology

A qualitative, exploratory, and descriptive study was carried out. Data were collected through three focus groups (FGs) and an inductive thematic analysis was conducted using *Nvivo12* software. The Consolidated Criteria for Reporting Qualitative Research (COREQ) guidelines were followed to describe the study.

The sample included pregnant women and their partners, postpartum women up to 12 months and their partners, and PHC professionals. Inclusion criteria required participants to be over 18 years of age and without mental illness, and health professionals to have professional experience in maternal health and obstetrics.

A non-probability convenience sample of 29 participants was obtained and the following three FGs were formed: 1 - pregnant women and their partners (n = 7 women; n = 1 partner); 2 - postpartum women up to 12 months

and their partners (*n* = 11 women; *n* = 3 partners); and 3 - PHC professionals (doctors *n* = 2; nurses *n* = 5).

An interview guide was developed for each FG, considering their specific characteristics, and validated by the study investigators. Questions posed to FG 1 (pregnant women and their partners) and FG 2 (postpartum women up to 12 months and their partners) covered the following topics: emotional experiences during the current or previous pregnancies and for FG 2 also during the postpartum period; emotional changes experienced during the same periods; perceived risk and protective factors for MMH; and suggestions for a prototype program of MMH promotion in the perinatal period (themes; formats; participants; duration; location). Questions posed to FG 3 (health professionals) focused on the following topics: perception of maternal emotional changes in the perinatal period (from pregnancy to up to 12 months postpartum); perceived risk and protective factors for MMH; difficulties/constraints in addressing MMH in PHC; and suggestions for a prototype program of MMH promotion in the perinatal period (themes, formats, duration).

The FGs were conducted in a Community Care Unit, belonging to the *Médio Tejo* Local Health Unit), by an investigator and a co-investigator. The co-investigator took notes on observations and nonverbal aspects of the participants' communication. The full content of the interviews, recorded in digital format, and the observed field notes were transcribed and subjected to content analysis. The information was coded and contextually analyzed using *NVivo 12* software. The contextual analysis was then reviewed by two investigators.

Methodological rigor was applied to the constructs used in the qualitative research. The credibility and reliability of the analysis was ensured by triangulating the results with the help of the co-investigator, which allowed for a more accurate description of the themes mentioned by the participants.

Regarding ethical considerations, all participants were informed of the principles and procedures of the study, and the confidentiality and anonymity of their responses were guaranteed. Our study received a positive opinion from the Ethics Committee of the Health Sciences Research Unit: Nursing of the Nursing School of Coimbra (CE: 604/07-2019) and from the Health Ethics Committee of the Regional Health Administration of Lisbon and Tagus Valley (Letter 9028/CES/2019).

Results

The FG participants in our study had the following characteristics: FG 1: Seven pregnant women (three primiparous and four multiparous with one child) and one partner, gestational age between 16 and 31 weeks; FG 2: 11 mothers (six primiparous and five multiparous with one child) and three partners, babies' ages between 1 and 10 months, childbirth experience - two traumatic and the rest normal without complications; FG 3: Seven health professionals: two general practitioners/family doctors and five nurses (one nurse specialist in maternal health and obstetrics; one nurse specialist in rehabilitation; one nurse specialist in community health, and two generalist nurses), working in Family Health Units and Community Care Units, all from PHC, with experience in maternal and child health ranging from 4 to 25 years.

The content analysis of the interviews resulted in 628 coding units, which were grouped into 23 categories and 37 subcategories organized into four dimensions.

The dimensions and respective categories are as follows: Dimension 1 - Maternal emotional experiences in the perinatal period (89 coding units); Categories - Anxiety and fear, Negative emotional states, Happiness and wellbeing.

Dimension 2 - Perceived risk factors for MMH (263 coding units); Categories - Personality traits, Idealization of pregnancy and motherhood, Breastfeeding difficulties, Sleep deprivation, Body changes, Difficulties with family and social support network, Difficulties in addressing MMH in PHC.

Dimension 3 - Perceived protective factors for MMH (119 coding units); Categories - Good family and social support network, Emotional skills and self-care practices, Support from health professionals.

Dimension 4 - Suggestions for an MMH promotion program (157 coding units). Thematic Categories - Expectation management, Physical changes due to pregnancy and postpartum, Emotion management, Conjugality and sexuality, Support network, Adaptation to a new family and new social roles; Organization Categories - Modality (Face-to-face groups); Participants (Inclusion of partners/couples, Individualization, and multiculturalism); Format (Workshops, online programs and blogs, telephone line and home visits by nurses) and Duration (Second trimester to 12 months postpartum).

Table 1 shows all categories and subcategories according to the dimensions, along with the most relevant coding units.

Table 1

Categories and synthesis of the coding units for the dimensions presented.

Dimension 1- Maternal emotional experiences in the perinatal period		
Categories	**Subcategories**	**Coding Units**
Anxiety and fear	Fear of miscarriage	(M1) - . . . I'd had three miscarriages. So, I felt very anxious when I found out I was pregnant . . . [I felt] very anxious and fearful all the time because of the experiences I'd had before.
	Fear for the health and development of the baby (fetus and newborn).	(P1) - Is everything going to be all right? Will the baby be born perfect? You think about these things all the time, I don't know why. (M5) - . . . we have the child, but then how is it all going to work out? Will it be, will everything go well with [the child's] development?
	Maternal separation anxiety	(M5) - I'm never relaxed . . . because when I go out and arrive at a place, I immediately call to ask if everything's well. If, if she is OK. If she's crying . . . I always want her to be with me.
	Anxiety caused by perception of maternal competence.	(P6) - . . . I don't know if I'm going to be a good mother. I don't know if I'll be able to do everything. Will I get it right? (Prof2) - . . . there's this anxiety . . . to be the best mother . . .
	Fear of childbirth.	(P3) - Childbirth is scary, it still is. (M5) – . . . I was very scared of childbirth. I really was . . .
Negative emotional states	Increased sensitivity/fragility	(P1) - I've changed, now I feel much more fragile. [If] anything [happens], I immediately get nervous, ah… I start crying and I'm much more fragile. Much more sensitive.
	Birth disappointment	(M6) - . . . I only saw [M] four hours after giving birth. I didn't get to have that moment that everyone talks about (trembling, tearful voice). (P3) - . . . I really wanted to have a physiological birth, but then it wasn't . . . it was disappointing, you know. Because I really wanted to have a normal birth.
Happiness and wellbeing		(M11) - But I really enjoyed being pregnant and I felt really beautiful and happy to to be pregnant. The birth went beautifully, it was spectacular.
Dimension 2 - Perceived risk factors for maternal mental health		
Categories	**Subcategories**	**Coding Units**
Personality traits		(P2) - That's right, I get discouraged very easily. (PP2) -She's very negative, that's the thing. She's very negative. (M5) - . . . I'm very proud . . . I always want to do it myself . . . I like knowing that I can do it. . .
Idealization of pregnancy and motherhood		(Prof5) - . . . because they idealize a very rosy world and then it's not like that . . . Some pregnancies are easier, others more difficult.
Breastfeeding difficulties		(M4) - . . . I couldn't breastfeed, I tried for a month, and I was very sad… I felt like the worst mother in the world . . . they put a lot of pressure on us to breastfeed . . .
Sleep deprivation		(M4) - Sleep deprivation is the worst . . . And we want to do everything. And then there's a lot of accumulated fatigue, and, yes, sleep deprivation.
Body changes		(P2) - . . . for example, the fact that I might get stretch marks and not get back to my usual weight.

Difficulties with family and social support network	Weak or absent support (from family or partner)	(M7) - . . . in the postpartum period, I was ... very alone, I didn't have any help, I didn't have, not even [from my] mother, . . . I had no help, I felt very depressed, very, very alone, I felt alone. My husband worked a lot, I spent my days alone, it was very difficult for me.
	Burden	(M4) - I was exhausted, you know? It seems like it's all on the mother. . . he gives me support . . . but it's not enough because I think it's a little bit, the burden is greater for women
	Pressure to be happy	(PP2) - In the stories . . . pregnancy is the best thing. . . . people often . . . end up hiding things and then when they want to reveal them, it's probably a bit late. (Prof3) - It's seen . . . as a very magical moment . . . it's very difficult to admit you have a problem and spoil all the magic.
	Return to professional life	(P5) - Yes, yes. The pressure at work . . . (Prof2) - . . . returning to work . . . will bring new challenges for the woman.
Difficulties in addressing maternal mental health in primary health care	Lack of time from professionals	(Prof2) - . . . because of the time constraints that exist for pregnant women's consultations, it's difficult . . . to address the mental aspect and for the woman to have time to open up and express herself about it is very difficult. (PP2) - . . . We go to a consultation, right? They ask if everything's OK… Everything's fine, that's it... And [what about] emotionally?
	Lack of specialized responses	(Prof1) - . . . from the point of view of the response, it's very limited, our services have few specialized responses and if it's already difficult to get a response in the postpartum period, it's not easy in the prepartum period either.
Dimension 3 - Perceived protective factors for maternal mental health		
Categories	**Subcategories**	**Coding Units**
Good family and social support network	Support and presence of the partner or baby's father	(P5) - . . . my husband's support, knowing that he's there, that I'm not alone. Ah, I think that he just needs to be there, even if he doesn't say or do anything, I think just that soothes me. (M4) - . . . the father's support was also very important, I think fathers are very important during childbirth . . . the fact that the father was always supportive and reassuring made me feel calmer.
	Support from family and friends	(P2) - The protecting factor . . . is the family . . . It gives me that security that "ok, whatever happens, I know I won't be alone, someone will always be there for me". (M9) - Okay. I have that (support), but with friends . . . I think, ah, if anything happens to me, I'll call my friend... and she'll help me, that's it.
Emotional skills and self-care practices		(P6) – . . . I have to look at myself in the mirror and accept myself as I am. That's one of the main protective factors, accepting ourselves. (M8) - For me ... it's one day at a time, what I can do, I do, what I can't, I don't. (laughter, joy). (M7) - . . . Ah, it's the air, the water, exercise, rest, fresh air, thinking about God, so I focused on that to feel better. And it worked and I feel fine, emotionally, I feel fine.
Support from health professionals	Birth preparation and postpartum recovery programs	(M1) - . . . it was great to come and do the program with nurse [P] because we talked, we were with other people . . . (M10) - These training programs, I think they also help us a lot, to say "look, it happened to me like this".
	Health professionals' availability	(M6) - We always have nurse [P] available ... it's very important to have a cell phone number that we can send a message to...
	Home visits by nurses	(M2) - The fact that nurse [G] came to the house in the first week of the baby's life was very important . . . [to] check right away what was going on.

Dimension 4 - Suggestions for a maternal mental health promotion program		
Thematic Categories	**Subcategories**	**Coding Units**
Expectation management	Idealization of motherhood	(Prof7) - I think that if a person is prepared for it, [the person] accepts it, . . . [the person] is readier, and realizes that it's going to be a transitional phase and therefore easier to get through
	Imaginary baby/ real baby	(P3) - To talk about this issue of not identifying ourselves with the child after birth, not seeing [anything of] themselves in the babies.
	Breastfeeding and alternatives	(M6) - . . . we have to support the idea that breastfeeding is the best option, but we also have to show that there are other options, and what they are and how we should go about it, or who we can go to for help . . .
	Deconstructing beliefs	(M1) - . . . sometimes they judge us wrongly for that, don't they? Because children . . . Ah, children have to be the best thing, and you have to be supermom, and you have to be everything, and do everything at home, and succeed.
Physical changes due to pregnancy and postpartum		(P6) - . . . Firstly, to demystify that it's not a disease, but you suffer . . . you suffer changes, the changes are normal, you'll feel more like this, you'll feel [more] like that . . . (Prof3) - What I was talking about in terms of changes to the body, explaining what it is, the symptoms, some have them, others don't, that's it, just to open things up, get things out in the open on the subject. . .
Emotion management	Expression of emotions	(M1) - . . . to understand and talk to people who show us that "look, it's normal for you to cry, it's normal if you're not always happy", it's normal . . . Honestly, feeling these things doesn't make us bad mothers.
	Coping strategies	(P6) - Yes, because actually everything affects a pregnant woman's mental health, I think ... Knowing that it's normal . . . And actually finding . . . tools that protect us a bit. (M2) - . . . in the program itself, to help people deal with anxiety, I think you could teach anxiety control techniques . . . relaxation techniques. . .
Conjugality and sexuality		(M2) - . . . there's one thing that isn't covered, which is the couple's sex life after childbirth. I think that's a weakness. Because that also generates anxiety.
Support network	Family support	(Prof6) - . . . What kind of support do [they] have? In other words, do [they] have a supportive husband or partner, mother and mother-in-law, and so on? . . .
	Social support	(M2) - . . . and those who don't have (help), so what can [they] do, right? . . . it could be a single mother, let's imagine, right? Or even someone who doesn't have family nearby, that person needs guidance before giving birth.
Adaptation to new family and social roles	Skills for making the transition to parenthood	(Prof3) - . . . parenting skills, that's something that should always be trained, there should be much more emphasis on it. (M7) - To have more information, you know? [On the] practical aspects of parenting.
	Strategies for older children	(P4) - One of the topics, the second child. How to approach? In order to always include the first [child]. (M11) - . . . how do we as parents, with such a small baby that needs so much attention, [feeling] more fragile and with our emotions running high, how do we pay attention to the other child. . .?
	Professional activity	(P5) - I think it would also be important to have a topic on how to deal with work and social pressure. (M9) - I think it's important to talk about the anxiety caused by returning to work.
Organization Categories	**Subcategories**	**Coding Units**
Modality	Groups	(P6) - Groups . . . Even if it's just to share, because just sharing, just talking, just listening to others, just understanding, is like support groups. . . We always feel more supported. Oh, and it creates, let's say, comfort, a sense of security. (PP2) – These, these meetings are good because often people have doubts and don't come forward because they feel embarrassed.
Participants	Inclusion of partners (couples)	(P6) - Preferably for the couple, if they can both be there, . . . even if it's not the child's father . . . But the person who's accompanying her. Ah, because, for us, it's always good to have someone by our side.
	Individualization and multiculturalism	(Prof3) - . . . each person is very different and the realities, even the cultures, are different, and the experiences are complicated and can bring some added difficulty or make it easier, depending on what each woman is experiencing.

Format	Workshops, online training programs, and blogs	(Prof2) - . . . trying to meet the mothers' expectations and needs... it can be during the weekend, it can be after work, it can be online. (M6) - . . . the training that takes place, not just in the room, but outside the room, to encourage pregnant women to get to know each other . . .
	Telephone line	(M2) - Having an open line, for example, at the Health Center, and having the possibility to call ... if you have [any] doubts, you can call.
	Home visits by nurses	(M2) - To go to the house and, if the Health Center and the technicians are able to do so, maybe even more often, . . . to have this possibility.
Duration	Second trimester to 12 months postpartum	(Prof1) - . . . starting in the second trimester, [because] the first trimester is very ambivalent and so interventions are usually recommended for the second trimester. (Prof4) - . . . I think it's better to extend it to the one year of life. Given that these situations still happen until that point . . . combining family life and work, the child, etc. . . . .

Note. (P) = Pregnant woman; (M) = Mother; (PP) = Pregnant woman's partner; (Prof) = Professional.

The synthesis of the collected information led to the identification of eight themes and approaches for the development of the program prototype. The overall identified content focuses on the acquisition of knowledge about the transition to motherhood (meanings and skills), the development of MMH literacy, the promotion of MMH protective factors, and the reduction/management of MMH risk factors (Table 2).

It is proposed that the implementation of the prototype program should begin in the second trimester of pregnancy and end at the end of the baby's first year of life. The suggested approaches include group sessions in different formats (face-to-face and online), individual and culturally sensitive sessions, and home visits by nurses. Additionally, it is recommended to integrate the prototype into childbirth preparation, postpartum recovery, and parenting classes emphasizing a multidisciplinary team context.

Table 2

Thematic Model of the Prototype Program for the Promotion of Perinatal Maternal Mental Health

Themes	Main contents
1- Transition to motherhood: meanings and dynamics	Transition to motherhood - meanings; Pregnancy/motherhood/family project - meanings; Family dynamics (relationships with families of origin; older children); Family roles; Idealization of motherhood: Strategies for expectation management.
2- Physical and emotional changes during the perinatal period.	Physical and emotional changes during pregnancy, childbirth and postpartum - Impacts on MMH; Expressing emotions and dealing with fears and guilt; Dealing with false beliefs and stigmas; Risk factors for MMH (personal, obstetric, family, social, others).
3- Perinatal mental health strategies / self-care	Emotional skills: Concepts and training; Strategies for managing psycho-emotional changes resulting from pregnancy, childbirth and postpartum; Self-care for Mental Health: Coping strategies / stress management / Self-esteem and healthy lifestyle habits.
4- Family and/or social support network.	Importance of the support network; Involvement of the partner and family; Learning to ask for help; Assertive communication strategies; Professional activity - Adaptation / New social roles.
5- Conjugality and sexuality: changes and meanings	Conjugality and sexuality - Changes and meanings; Conjugality and parenting - Reinforcing the importance of parental relationships; Developing communication and conflict management skills.
6- Imaginary baby/ real baby	Imaginary baby/ real baby - Expectations. Attachment; Baby's skills - meanings, adjusting expectations: baby's temperament, crying and sleeping; Skills training in responding assertively to the child's needs.
7- Transition to parenthood	Meanings; Socio-emotional skills for the transition; Skills training in newborn care (breastfeeding and others) - Multidisciplinary approach.
8- Integrating the birth experience	Expectation management. Consolidation of strategies and/or developed themes; Reinforcing mental health promotion strategies.

Note. MMH = maternal mental health

Discussion

Our study has identified the components of a prototype program for the promotion of MMH in the perinatal period through a process of evidence-based knowledge building. Analyzing mothers' experiences and the protective and risk factors in the process of "becoming a mother" was essential to deepen the issues related to this stage of the life cycle and their impact on women's mental health, as well as to identify strategies to promote MMH, thus confirming the work developed by other authors (Macedo et al., 2014; Marques et al., 2014; Nagle &

Farrelly, 2018; Tripathy, 2020).

The proposed interventions, with an emphasis on modifiable psychosocial risk factors, especially those related to the interaction between personal characteristics and social contexts, are in line with the authors who consider them effective and beneficial (Marques et al., 2014). Several programs that promote the development of healthy relationships and family and social support networks emphasize the importance of social support during this period (Fisher at al., 2010; Harvey et al., 2018).

The promotion of positive relationships between couples (communication and emotion management), stress management, problem/conflict resolution, skills training, and internal locus of control building are strategies used in MMH promotion programs as well as the management of expectations about parenthood through establishing psychosocial goals and resources (Drozd et al., 2015; Harvey et al., 2018).

Several authors also refer to the themes of attachment and recognition of the baby's cues as important skills for managing emotional states (Fisher et al., 2010; Wynter & Rowe, 2010) as well as the expectations between imaginary baby and real baby (Arrais et al., 2014; Fisher et al., 2010). According to the authors, it is necessary to promote a cognitive and less emotional response of parents to crying and to help them develop skills to respond assertively to their babies' needs (Fisher et al., 2010).

In addition, the lack of education and training of health professionals in this area is considered by several authors to be a barrier, resulting in the lack of knowledge about MMH-related aspects associated with the transition to motherhood and the implementation of practices that affect women's confidence and willingness to ask for help and overcome problems. Women do not always feel that health professionals are sensitive to their needs. As a result, they refrain from talking openly about their feelings due to shame and stigma, as well as professionals' lack of time to listen to them (Nagle & Farrelly, 2018) and lack of adjustment to the women's individual needs and health education guidelines (Ramalho et al., 20-23). All three FGs referred to these aspects, which were considered essential to build trust and promote a non-stigmatizing environment, thus highlighting the importance of health professionals in promoting maternal well-being.

The proposed prototype program adopts a primary and universal approach, as it aims to minimize the incidence of maternal mental disorders by controlling risk factors while targeting the entire population. According to some authors, these approaches are less stigmatizing and more easily accepted. Although the results are not very significant, they are important from a public health perspective because of the impact on the family and community systems (Fisher et al., 2010). The prototype is also based on a psychoeducational approach that trains women to recognize symptoms and encourages them to seek help and support. This is in line with other authors who have advocated this approach to demystifying beliefs and feelings of guilt related to perceived maternal competence as well as those arising from self-stigma associated with mental illness (Arrais et al., 2014; Drozd, et al., 2010).

Furthermore, it is essential to have a flexible and accessible approach that is culturally adapted to different MMH care contexts. Therefore, special attention is recommended for women from ethnic minorities or displaced from their countries of origin, whose vulnerability to mental illness is higher due to their psychosocial factors (Monteiro & Mendes, 2013; Watson et al., 2019), as well as for women who are unable to attend these events due to complex life circumstances (poverty, isolation, transportation difficulties, etc.) (Harvey et al., 2018; Marques et al., 2014).

The proposal in our study to carry out home visits by nurses during the postpartum period to support the family has been highlighted by some authors as crucial to promoting women's emotional well-being. However, the goals of these visits should also include early recognition of symptoms and referral to specialized mental health care (Wylie et al., 2011).

In this sense, nurse specialists in mental and psychiatric health have been identified in some studies as an important resource in teams, underscoring their differentiated role in the provision of specialized (Guerra et al., 2014) and culturally sensitive care (Monteiro & Mendes, 2013), as well as in the development of programs at this level (Harvey et al., 2018).

This study has limitations due to being conducted in a single-care setting and was unable to explore the impact of the transition to parenthood on partners and the role of infants in women's mental health during the perinatal period. In addition, the lack of validation of the prototype limits the assessment of its relevance and/or the need for possible changes.

Conclusion

Our study has contributed to the identification of the themes and methodological approaches of a prototype to promote MMH in the perinatal period, based on the synthesis of results and evidence found in literature about programs in this area. The themes aim to train women in maternal mental health literacy, mental health self-care in the transition to motherhood, and the promotion of protective factors and reduction/management of risk factors. Overall, our study confirms the importance of developing health policies that promote maternal well-being, as well as the need for specialized training for health professionals who accompany women in the perinatal period, in order to make their practices more appropriate and sensitive to the aspects of MMH.

The proposed prototype offers innovative implications for practice, as it is integrated into Primary Health Care (PHC), involves a multidisciplinary team, and set in a community setting. Regarding future research, our study recommends the further evaluation and validation of the prototype, and the study of the "journeys" of the father/partner, other children, and grandparents from a transgenerational perspective, as their experiences intersect and certainly influence the promotion of the mental health and well-being of the whole family.

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