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Improving education in perinatal mental health, a participatory qualitative analysis

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A recent systematic review found that education programs in perinatal mental health (PMH) had limited effects on detection, referral, and support of parents with perinatal mental health problems. This participative qualitative study (i.e. co-production by academic researchers and researchers with lived experience as equal partners) sought to explore the experiences, views and priorities of persons with lived experience (PWLEs), obstetric providers, childcare health providers and mental health providers (MHPs) on education in PMH. We conducted nine focus groups and 24 individual interviews (n = 84 participants: 24 PWLEs; 30 obstetric providers; 11 childcare health providers and 19 MHPs). We used Braun & Clarke's inductive six-step process in the thematic analysis. We found some degree of difference in the priorities for education in PMH identified by PWLEs (e.g. person-centred collaborative perinatal healthcare) and providers (e.g. knowledge about perinatal mental health problems). Providers considered PMH assessment as part of their role (except for parents with suicidal ideations or serious mental illness) but reported feeling ill-prepared to do so. Organisational factors comprised PMH integration into standard perinatal healthcare and common culture between non-MHPs and MHPs. Education programs in PMH should be co-designed with PWLEs and focus on providing collaborative person-centred care for all parents.

Keywords Midwifery, Education, Perinatal mental health problems, Co-production, Participatory research

Perinatal Mental Health Problems (PMHPs) - herein we will use this term to refer to perinatal psychiatric disorders in accordance with the preferences of persons with lived experience - commonly consist of anxiety, non-psychotic depressive episode, psychotic episodes, post-traumatic stress disorder and adjustment disorder during pregnancy and the 1st year postpartum. PMHPs remain predominantly unrecognized, undiagnosed, and untreated[1].

Given their role in perinatal care providing multiple occasions to discuss perinatal mental health (PMH), obstetric providers are key stakeholders to improve perinatal mental health care (PMHC). The International Confederation of Midwives (ICM) (2024)[2] consider postpartum mental health assessment and the detection, referral, and support of parents with PMHPs as Essential Competencies for Midwifery Practice (ECMP). Despite parents' preferences for discussing PMH with obstetric providers than mental health providers (MHPs), obstetric

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providers often report feeling less comfortable with opening conversations about PMH compared with assessing and managing physical health and consider their role into PMHC as unclear[3–8].

Extending the results of previous reviews on obstetric providers' educational needs in PMH and related interventions[9–11], a recent systematic review found that understanding of each other's role into PMHC and the intention to participate in PMHC are influential for the effective translation of PMH related competencies into clinical practice, above and beyond knowledge, skills, and confidence[8].

There remain some limitations to the current body of evidence. First, despite figuring into the ICM standards for global midwifery education (2024)[2] and calls to improve providers' education in PMH[4,6,9,11], education in PMH is highly variable across studies (e.g. suicide risk assessment is the least covered topic in education interventions on PMH[8]) with limited effects on obstetric providers' knowledge, skills, detection and referral rates and depressive symptoms. Second, student midwives, midwives, obstetric residents, and even specialist midwives continue reporting feeling ill prepared to care for parents with PMHPs[4,8,9]. Third, the ECMP focus on postpartum depression, anxiety, and psychosis without covering the antenatal period or the full range of PMHPs[2]. Fourth, most studies on PMH education came from the United States, Australia, or the United Kingdom and did not include all relevant stakeholders, e.g. persons with lived experience (PWLEs)[8,9,11]. The quality of the studies included in these reviews remains low to moderate due to the presence of methodological bias and there is to our knowledge no validated curriculum developed for various types of perinatal health providers[4,8]. Fifth, most studies did not involve researchers with lived experience nor used a participatory design.

According to the Medical Research Council framework for developing complex interventions[12], such research should include the meaningful involvement of persons with lived experience and the participation of all other relevant stakeholders. To inform the design of future interventions, this participatory qualitative study sought to explore the experiences, views and priorities of PWLEs and various perinatal health providers on education in PMH.

Methods

Patient and public involvement

The present study is part of a larger study on the improvement of perinatal mental healthcare, described elsewhere[13]. We used a participatory action research design, i.e. a co-construction approach that promotes a meaningful involvement of PWLEs[14]. The degree of participation in this study ranged from a consultative level (e.g. individual interviews or focus groups) to a collaborative and empowering level (e.g. integrating a co-researcher with lived experience - the 3rd author - in the research team from the start of the project, who has been involved in the analysis and all key project decisions)[15]. Other members of the research team comprised clinical researchers specialised in perinatal psychiatry (midwife, child and adolescent (C&A) psychiatrist, adult psychiatrist).

Study design and participants

The present study explored the experiences, views, ideas, expectations and priorities on education in perinatal mental health of (i) persons with lived experience of PMHPs, serious mental illness or autism, (ii) obstetric providers, (iii) childcare health providers, (iv) mental health providers. We combined focus groups for health providers and in-depth individual interviews for persons with lived experience conducted between December 2020 and May 2022. We used the consolidated criteria for reporting qualitative research (COREQ[16]) to design the study protocol and report results. Supp. Material S1 describes the recruitment strategy for the PWLEs and the health providers groups. Eligible participants in the PWLEs group were adults (age > 18) with lived experience of PMHPs (self-identified) or a confirmed diagnosis of serious mental illness (schizophrenia, bipolar disorder or major depression; DSM-5[17]) or autism spectrum disorder (hereafter referred to as autism; DSM-5[17]). Eligible participants in the health providers' group were obstetric providers (midwives and obstetricians), childcare health providers (paediatricians, general practitioners, paediatric nurses, childcare assistants) and mental health providers (MHPs; C&A psychiatrists, adult psychiatrists, psychologists, mental health nurses, social workers). They were recruited through three perinatal health networks in the Auvergne Rhône-Alpes region and a group of experts in perinatal mental health (PMH) in the Ile de France region. The relevant Ethical Review Board ("Comité de Protection des Personnes (CPP) Ile de France 1"; Legislative Decree 196/03-France) approved the appraisal protocol on March 10, 2020 and all participants gave informed consent. We complied with GDPR and CNIL regulations. This study has been conducted in accordance with the World Medical Association's Declaration of Helsinki (Tokyo 2004, revised) and the French Public Health Law no. 2004-806 of 9 August 2004 concerning research involving the human person, application decree no. 2006-477 of 26/04/2006 amending Chapter I of Title II of Book 1 of Part 1 of the French Public Health Code concerning research involving the human person, as well as the decrees in force.

Procedure

Researchers' own position, views and opinions can influence the research process[18]. We used a participatory research design and adopted a reflexive position from the inception of the project to ensure that researchers' convictions did not dominate the study design or data collection and analysis. To capture the complexity of the topic and to facilitate participants' expression on sensitive information (i.e. their personal experiences, views, feelings and attitudes[19]), we conducted in-depth individual interviews for PWLEs and separate focus groups for health providers according to their type of practice (i.e. obstetric providers; childcare health providers; MHPs). Given the pandemic context, most of the individual interviews and focus groups were conducted online using secured video-conferencing solutions. Supp. Material S1 provides details on data collection using focus groups and individual interviews. Participants were asked the same set of questions in the individual interviews and in focus groups (see Supp. Material S2 for the semi-structured interview and general information recorded

for PWLEs and health providers). We asked participants about their experiences, views, feelings, and attitudes towards PMHC and the care of perinatal depression. For this study, we made a focus on education needs in PMH. Individual interviews and focus groups were conducted by at least two members of the research team, video and tape recorded and fully transcribed.

Data analysis

For the thematic analysis, we used an inductive, rather than theoretical, approach to qualitatively analyse the data (i.e. "bottom-up" identification of themes[20]). We followed the six-step process by Braun and Clarke (2006)[20] - details are provided in Supp. Material S1. Coder debriefings occurred throughout the analysis to review the identified themes and reach an agreement on coding discrepancies. To allow a deeper and broader understanding of the topic, we used methodological triangulation (i.e. using several types of qualitative approaches, individual interviews and focus groups[21]), investigator triangulation (i.e. independent coding by two researchers with different backgrounds, a specialist midwife and a perinatal psychiatrist and review of all codes by a 2nd perinatal psychiatrist and a lived experience researcher) and data triangulation (i.e. comparison of the perspective of various stakeholders on a same topic[21]). Participants did not give their feedback on the results. We obtained code saturation, i.e. the point in the research process where no new information is discovered in data analysis, and meaning saturation, i.e. the point when no further dimensions, nuances, insights of issues can be found[20].

Results

Nine focus groups and 24 individual interviews were conducted (n = 84 participants). The PWLEs group was composed of four women and one man with lived experience of PMHPs, nine women with serious mental illness and ten autistic women. The provider group was composed of 30 obstetric providers (27 midwives, 3 obstetricians), 11 childcare health providers (4 paediatricians, 3 general practitioners, 3 paediatric nurses, 1 childcare assistant) and 19 MHPs (3 child and adolescent psychiatrists, 4 adult psychiatrists, 8 psychologists, 3 MH nurses and 1 social worker). Sample characteristics are presented on Table 1. We identified factors that occurred at different levels: provider, interpersonal and organizational. The results of the qualitative analysis are presented in Figure S1, Tables 2, 3 and 4, and Supplementary Tables S3, S4 and S5 (quotations supporting the themes and subthemes).

Provider and interpersonal level factors

MHPs and PWLEs observed a consumer-driven change in non-MHPs interest in PMHC, mirroring an increased awareness of PMHPs in the general population. However, this often came at a shock for midwives and other non-MHPs (e.g. learning about suicide being one of the leading causes of maternal mortality). A potential explanation is that contrary to obstetric complications occurring rapidly after childbirth (e.g. postpartum haemorrhage), PMHPs and maternal suicide usually occur later in the postpartum, making the topic less concrete / less of personal concern for obstetric providers.

PWLEs and several health providers described PMH and wellbeing as topics health providers should initiate conversations on with all parents. According to many participants, obstetric providers' place in perinatal healthcare provided many opportunities to open discussions about PMH (e.g. early prenatal and postnatal interviews, routine follow-up visits, childbirth classes or perineal rehabilitation).

Despite considering that PMH assessment is part of their role, perinatal health providers reported to feel ill equipped to provide PMHC. The potential reasons included a lack of knowledge about maternal/paternal PMHPs and a lack of interviewing/distress management skills. Parents and most health providers reported positive attitudes towards opening conversations about PMH and the use of screening tools that were seen as way to reduce stigma. Twelve health providers, especially private practice health providers, described distressing emotional experiences in case of positive answers combined with declined referral to specialised mental health services. Alternatives to formal screening included targeted screening on identified risk factors and behavioral observation, e.g. mother-baby interaction. Compared with midwives, pediatricians reported more negative attitudes towards the use of screening tools and to rely more on behavioral observation.

While no anaesthetist participated in the present study, mothers outlined their potential role in perinatal mental health (e.g. prevention of childbirth trauma). Perinatal health providers' lack of training in distress management/counselling skills resulted in discomfort in case of positive answer - in particular, when caring for women declining referral. While the position of fathers was mainly envisioned from the perspective of their partner, some PWLEs and non-MHPs described the need to assess fathers' PMH and to provide them adequate PMHC.

Receiving feedback from MHPs after referrals (e.g. accuracy of detection/referral and information about the positive outcomes achieved through referral) and formal supervisions by MHPs was helpful to improve non-MHPs' ability to detect and manage PMHPs and their engagement in PMHC (e.g. finding meaning in opening discussions about PMH and being able to reassure women about referral to mental health services). Similarly, perinatal health providers described multidisciplinary work and joint obstetric care as useful resources.

We found some degree of difference between education needs identified by health providers and PWLEs. Several women reported negative experiences of perinatal healthcare (e.g. powerlessness, communication problems, lack of empathy and/or disrespect). PWLEs identified personal recovery and collaborative person-centred care as priorities, whereas the priorities identified by health providers covered knowledge about PMHPs and related skills, e.g. opening discussions about PMH without being intrusive, managing distress in case of a positive answer and discussing referral options. MHPs supported the adoption of a continuum approach of PMH in training interventions.

	Obstetric providers (n = 30)	Childcare health providers (n = 11)	Mental health providers (n = 19)	Persons with lived experience (n = 24)
Mean age (years)				
Mean (SD)	45.1 (9.96)	47.7 (12.67)	41.68 (7.94)	33.23 (4.41)
Range	32–64	28–74	30–60	22–40
Gender (female), n (%)	30 (100)	10 (91)	17 (89)	23 (96)
Profession, n (%)				
Midwives	27 (90)			
Obstetricians	3 (10)			
Pediatricians		4 (37)		
General practitioners		3 (27)		
Pediatric nurses		3 (27)		
Childcare assistants		1 (9)		
C&A psychiatrists			3 (16)	
Adult psychiatrist			4 (21)	
Psychologists			8 (42)	
Mental health nurses			3 (16)	
Social workers			1 (5)	
Type of practice, n (%)				
Hospital	17 (56)	3 (27)	14 (74)	
Private practice	6 (20)	5 (46)	5 (26)	
Mixed	2 (7)	0 (0)	0 (0)	
Territorial	5 (17)	3 (27)	0 (0)	
Median duration of professional experience (years)				
Median (SD)	11.5 (9.06)	18.85 (10.47)	5.83 (3.62)	
Range	0.08–37	2.5–40	1–15	
Cared for women with perinatal depression (within the 3 last months), n (%)	9 (30)	5 (45)	19 (100)	
Confidence when caring for women with perinatal depression*				
Mean (SD)	2.83 (1.02)	1.17 (1.36)	3.88 (0.96)	
Range	1–5	1–5	1–5	
Education level (years)				
Mean (SD)	17.50 (0.28)	19.27 (1.00)	18.74 (0.79)	15.65 (2.48)
Range	17–22	13–22	15–25	11–22
Diagnosis n (%)**				
Peripartum depression				8 (33)
Schizophrenia spectrum disorder				3 (12)
Bipolar disorders				5 (21)
Borderline personality disorder				2 (8)
Autism spectrum disorder				10 (42)
Lived experience of PMHPs (for parents with SMI and autistic parents only; n = 8), n (%)				3 (37.5)
Marital status (in a couple), n (%)				18 (75)
Contact with perinatal health services through priori pregnancies, n (%)				15 (62)
Parenthood status (parent), n (%)				13 (54)

Table 1. Sample characteristics. *From 1 (Not comfortable at all) to 5 (very comfortable). **4 participants had two co-occurring conditions (1 woman with bipolar disorder and borderline personality disorder; 3 autistic mothers with peripartum depression). *PMHPs* Perinatal Mental Health Problems.

Contrasting with PMH assessment, midwives considered that caring for women with serious mental illness or suicidal ideations was not part of their role and held stigmatizing attitudes towards this population (e.g. perceived dangerousness for self, others, and the baby). Midwives reported to lack awareness about suicide during the perinatal period and negative attitudes towards suicide risk assessment. Given depression remains often undetected and suicide usually occurs after the end of the follow-up by obstetric providers some participants suggested to raise awareness on these issues (e.g. providing feedback on women who consulted in perinatal psychiatry for PMHPs/suicide ideations). While midwives did not report training needs related to serious

A consumer-driven change Increasing awareness of PMHPs sometimes at a shock for HPs (a topic becoming suddenly concrete); multiple occasions to discuss PMH	**C&A psychiatrist 3** [male, 49 years old]: "there is a movement. [...] I don't feel it was so spontaneous five or ten years ago, anyway, so supported by service users"; **Midwife 24** [female, 35 years old]: "it was highlighted by this study, and that's true that I myself was surprised at the time, at well... (...) I hadn't realized the extent of it"; **Midwife 20 [female, 60 years old]:** [speaks calmly but rather rapidly. She accompanies her words with hand gestures] "Well, I think we're also helpless because there's still something that's not concrete for us."; **Mother 2 [36 years old]:** "our health system in France (...) that's not a system where a woman experiencing her postpartum depression, experience it alone, without any interaction. [...] There are many occasions for women to connect with providers."**; Midwife 13** [female, 40 years old]: "I do couple childbirth classes. So, I discuss these topic"
Who should be trained and initiate conversations? A topic on which women would have liked HPs to initiate conversations on	**Mother 1** [33 years old]: "discussing that beforehand, more at the midwives and obstetricians' level, even discussing that every time."; **Mother 2:** "at the height of my end of the world, I came to see my doctor [...]. Years after [...], she tells me, "I don't remember that you were that unwell. You never told me. And then I said, "but you never asked!"."; **Mother 4** [35 years old]: " that should be the midwives who do that job during the pregnancy follow-up."
Midwives: key providers to detect and refer parents	**Midwife 4** [female, 34 years old]: "as midwives we detect a lot patients and we can really propose the right team and (...) follow-up."; **Midwife 19** [female, 60 years old]: "the fact that we're a medical profession (...) gives us a support that I think is interesting for exploring all domains"; **Paediatrician 2** [male, 74 years old]: "every woman has a referent midwife when leaving the maternity. [...] there is probably a screening mission to be implemented."
All relevant stakeholders including paediatricians, GPs, anaesthetists, non-specialised psychiatrists and other frontline providers	**Paediatrician 1** [female, 54 years old]: "With all the dysfunctions you can imagine, phoning the firemen, "baby is crying", "but, well, Mrs., that's normal, children cry"."; **Mother 2:** "providers are afraid of maternal difficulty. (...) there would be a lot of things to do to demystify."; **C&A psychiatrist 3:** "adult psychiatrists and C&A psychiatrists (...) they don't have skills and... at the end that remains undetected..."
Midwives, GPs and MHPs have more positive attitudes towards screening than paediatricians Midwives have more negative attitudes towards their role in screening for suicidal ideations or supporting women with SMI	**Midwife 21** [female, 38 years old]: "I have to ask to all my patients, systematically". And noticing that I'm getting familiar with that question, I have more and more positive answers."; **Psychiatrist 2:** "the delay before accessing care that is to be related to the absence of screening or to incomplete screening."; **Paediatrician 3** [female, 47 years old]: "I stay in my role of paediatrician because you can't be at all places too."; **Midwife 26** [female, 52 years old]: "I don't have it in mind at all. (...) Except of course if she evokes dark thoughts during postpartum care."; **Mother SMI 5** [30 years old]: "That gives a little the impression that people with psychiatric disabilities, well... that they must not have children!"
"A hard to carry clinical care": an experience that can be emotionally distressing for providers	**Midwife 5:** "because in private practice, we're a little, well... [swallows] alone facing ourselves and the patient..."; **Paediatrician 3**: "they give you an emotional load or a suffering load, and, well, sometimes you don't know how to deal with it."; **GP2** [female, 47 years old]: "that someone would receive what we just discussed together and the fact that they needed help and for me, the feeling I wasn't letting them go resourceless"

Table 2. Why improving education in perinatal mental health and who should be trained? *GP* General Practitioner.

1. Considering parents' experience and preferences in perinatal healthcare (including parents who are health providers, parents with SMI and autistic parents)	**Mother 3 [35 years old]:** "the feeling of infantilization [...] they did not consider me as a decision-making adult"; **Mother 4 [35 years old]:** "the thing is to know how to communicate without being scary. [...] we're entitled to the truth, to know"; **Autistic mother 4 [35 years old]:** "I don't think there should be something "mandatory".; **Mother 2**: "It happened like I wanted to. [...] I was there, and I was deciding. [...] I felt very powerful for weeks."; **Paediatrician 1: "**a language that is a barrier, and that's hospital jargon. [...] families haven't understood a tenth of it"; **Autistic woman 6 [female, 36 years old]:** "a free space where you could not be afraid of really telling what is ok, what is not ok, without feeling judged. [...] take this into account"; **Mother SMI5**: "the hospital where I gave birth, [...] we're numbers, and we give birth, and... the baby is in good health and, well, everything is ok. [...] there is not... not enough proximity, empathy"; **Paediatrician 4 [female, 48 years old]:** "we're mainly focused on pain, the care for the baby [...] Back home, you're on your own."; **Mother 3:** "to ask again providers just being themselves. [...] they're human beings like others."
2. Common language, continuum approach of PMH and knowledge about PMHPs / SMI /autism (including risk factors, screening, suicide risk assessment, referral, and treatment options Non-judgmental attitude and listening and distress management skills	**Midwife 3 [female, 42 years old]: "**sharing a common language [...] the language of psychiatry and [...] obstetrics must meet at some point'; **Midwife 8 [female, 35 years old]:** "some definitions that could make the distinction between different psychiatric disorders"; **Psychiatrist 2 [female, 34 years old]:** "the cognitive overload associated with parenthood" ; **Paediatrician 3**: "some studies on paternal depression [...] maybe that could change our conception of the peripartum" ; **Midwife 25 [female, 60 years old]**: "That's not easy to discuss this question. [...] I don't feel competent if mums express dark thoughts."; **Midwife 11 [female, 53 years old]:** "midwives are seeing more and more "psychiatric" women under heavy treatment." **Autistic woman 3:** "the staff would say, "oh, but she's autistic, well, no but she wouldn't be able to care for her child"; **Midwife 14 [female, 45 years old]**: "for a long time we protected ourselves from some questions because we didn't know what do with it"; **GP1:** "that's not always easy to discuss depression..." ; **Midwife 24:** "ask that question even if sometimes you can sometimes feel a little uneasy."; **Midwife 23 [female, 39 years old]:** "maybe a screening grid that indicates the signs of depression, [...]we aren't well trained to that [...] some little ready to ask questions."; **Psychiatrist 2:** "the midwife who has to administer the questionnaire, (...) she has to contextualize things a bit."; **GP1:** "And that's to whom refer?"; **Mother 2:** "maybe an interview guide or a questionnaire to be completed by the woman, well, a support of discussion for all providers who don't dare to open the discussion."; **Mother 2:** "a directory of resources so that professionals know who to refer women."; **Midwife 16 [female, 50 years old]:** "some small advices concerning these mothers at the maternity who alert us [...] How to react? What should we tell them?"; **Obstetrician 3 [female, 34 years old]:** "Some kind of score that could show that they belong to a category at risk for depression, and what type of care could be offered."; **Obstetrician 1 [female, 62 years old]:** "some graduated care."; **Paediatrician 2:** "some extremely precise concept: urgent / not urgent. [...] what should we do?"; **Midwife 18 [female, 64 years old]**: "how to behave and to support"; **GP 1 [female, 58 years old]**: "that's time, that's connection, that's listening"; **Midwife 21:** "they would say "well, I already had a postpartum depression, that's something that scares me". And in fact, I feel currently resourceless to answer them well"; **Midwife 1 [female, 38 years old]:** "I rarely interrupt a person who is talking. [...] Then I systematically return on a form of reformulation of what was told"; **GP1:** "simply by naming things, by not hiding things, by being rather in the dialogue with families and hospital services

Table 3. Convergence and degree of difference between the education needs in perinatal mental health identified by persons with lived experience and health providers 1) Person centred collaborative care for PLEs and some perinatal health providers , and 2) Knowledge and communication skills for health providers.

Society level factors Switching from infant-centred care to family centred care in the peripartum and providing non stigmatizing information about PMH to all parents/	**Mother 3**: "I was the focus of the consultation and because before ultrasounds, they asked me, "how are you feeling? Are you eating well? Are you sleeping well?" And I told myself, "I'm not only the person who bears"."; **Psychiatrist 3 [female, 32 years old]**: "that's very much a story of awareness of the general population"; **Midwife 14**: "that it would be part of the landscape […] Known and recognized"; **Psychiatrist 2**: "that it would be part of the information, just like we will inform women on Guthrie or breastfeeding"; **Mother 3**: "on my sickness leave, it was written […], "psycho-depressive disorder" […]. I told myself, "ok, you're part of that group", […] "that's it, all you didn't want to, well, you're inside"; **Mother 1**: "My husband […]. For him, depressed are people letting themselves go, you know? […] My major fear was he that he would leave me"; **Paediatrician 1**: "there is a great worry, I think, from families, if they're not "well-behaved", (…) because it could lead to a report of the child."; **Mother 1**: "being perfect, to take perfect care of her house, to succeed at breastfeeding, to have quiet children"; **Obstetrician 1**: "I wish it could last longer in postpartum, that the peripartum network could continue in postpartum"; **Mother SMI 8 [40 years old]**: "the lack of care. I found it hard to be abandoned […] after childbirth, that I didn't have a doctor anymore and all that. […]. I would not like to be abandoned. the part on maternal healthcare is important."
Organizational level factors Continuity of care between pregnancy and postpartum and stakeholders involved in perinatal mental health; needs extra-time to address PMH issues; coordinated care by specialist midwives; Multidisciplinary work; knowing each other role; joint psychiatric and obstetric services; need for feedback from MHPs	**Midwife 27 [female, 34 years old]**: "I receive letters for patients that I never saw and they explain to me that I was supposed to take over. […] No appointment was made, and they did not contact us."; **Midwife 1**: "we often ask ourselves about postpartum depression during the next pregnancy. […] There is a period of emptiness for women in postpartum between the end of the private practice midwife's care and the 1st appointment with the GP"; **Midwife 12 [female, 54 years old]**: "we try to do this prevention in any case, but it's not always easy because we sometimes don't have the time to see everyone"; **Midwife 18 [female, 64 years old]**: "what's essential is that there is that someone continues intervening"; **Paediatrician 3**: "We don't always have access to that, maybe also because we don't have much time to ask people […] we still have to do a certain number of things and maybe we don't always have the space to go further."; **Midwife 17 [female, 36 years old]**: "Well, in my small town, there is no psychiatrist. So that, that's already complicated."; **Midwife 3:** "we are lucky to have that position of midwife case manager, which allows […] to detect vulnerabilities, precariousness, psychological distress, patients using drugs, and then in a second step we can call them, orient them and that creates trust."; **C&A psychiatrist 1 [female, 52 years old]**: "the connections between health providers and so later the trust between the patient who will refer herself to a midwife and then will have to refer herself to a psychiatrist or a psychologist. […] offering joint consultations"; **Midwife 21 [female, 38 years old]**: "that there be a sort of multidisciplinary follow-up. And in multidisciplinary that's not just gynaecologist, paediatrician, midwife that's the psychiatric side too."; **Midwife 19**: "the fact that we communicate with each other, I have the feeling that it reassures them. […] Each one in our place but working in the same direction. Each one with our own skills and specificities"; **Midwife 18**: "When they're followed by psychiatrists, that's very complicated to have feedback."
How education programs should be delivered—Common training & role plays	**GP1**: "Learning how to know each other better, could it go through common trainings so that we could know each other better?"

Table 4. Contextual factors influencing the translation of the learned skills into clinical practice / the implementation of a training program.

mental illness, women with serious mental illness and autistic women reported experienced and anticipated stigma during the interactions with perinatal health providers.

Organizational factors

Organizational factors included dedicated time to assess PMH, dedicated funding, continuity of care, barriers related to language/culture and the presence of clear referral pathways and available specialist mental health services. Non-MHPs called for a better integration between mental health and perinatal health care to reduce stigma (e.g. integrating PMH as a routine aspect of perinatal healthcare) and improve PMHC (e.g. common culture and shared training sessions).

Discussion

Main findings

To our knowledge, this qualitative study is the first integrating the perspective of PWLEs, obstetric providers, childcare health providers, and MHPs on the improvement of education in perinatal mental health using a participatory research design. We identified a wide range of leads to improve education in PMH that included: 1) meeting the specific priorities identified by PWLEs (e.g. person-centred collaborative perinatal healthcare); 2) facilitating a meaningful engagement into perinatal mental healthcare; 3) improving non-MHPs' knowledge, skills and attitudes about persons with suicide ideations or serious mental illness.

Strengths and limitations

There are limitations. First, our sample was self-selecting (i.e., persons interested in improving PMHC) and cannot be considered as representative of the experience of all stakeholders involved in PMHC. However, the large size (n = 84), the diversity of the sample (i.e., realization in five distinct locations, the inclusion of various PWLEs and inclusion of health providers with diverse backgrounds and practices working in urban, semi-urban and rural areas) and the use of three triangulation methods are considerable strengths. Similarly, the proportion of women was high in all groups and most health providers worked in public hospitals, thereby reducing the generalizability of our findings to men and private practice providers. Of 24 PWLE, 1/4 worked as health providers or social workers. Given the experience of this at-risk population remains under-investigated, this could be a strength. Second, there was an unequal representation of persons with lived experience (n = 24) and healthcare providers (n = 60) in this study, which could have affected the research process and analysis[15]. However, the large number of participants with lived experience (n = 24) and the integration of a co-researcher with lived experience in the research team as an equal partner may have addressed this limitation. Third, we did not involve student midwives, managers from public hospitals or local/regional public healthcare. Fourth, many individual interviews or focus groups were conducted online because of the pandemic context, which could have affected the quality of data collection. However, in-person and online focus groups yielded comparable themes and online discussions facilitated sharing of in-depth personal stories and discussion of sensitive topics in a recent study[22]. Fifth, researchers' own position, views, and opinions can influence the research process[18]. Similarly, medical dominance, i.e. the asymmetry in relations and power dynamics that could exist in a research team when medical doctors are involved[23], can also influence the research process. Adopting a participatory research design and a reflexive position from the inception of the project may have addressed these limitations.

Interpretation

We found many interactions but also some degree of difference in the priorities for education in PMH identified by PWLEs (e.g. person-centred collaborative perinatal healthcare) and non-MHPs (e.g. knowledge about PMHPs). Most provider-identified education needs concur with previous research[9–11]. MHPs supported the adoption of a continuum approach of PMH to reduce stigma, associated with more prosocial reactions in non-perinatal depression[24]. However, the degree of difference in the priorities identified by PWLEs and non-MHPs is concerning because communication skills and collaborative person-centred care are part of the ECMP[2] and have been identified as crucial for PMHPs and perinatal suicide prevention (e.g. by reducing shame and fostering connection[25–27]).

Perinatal health providers in this study had positive attitudes towards PMH assessment but reported feeling ill-equipped to do so - this aligning with previous research[8–11]. In addition to factors already described in the literature (e.g. provider level: knowledge/skills; organizational level: clear referral pathways/supervision by MHPs[8,28]), we found that putting PMH in context in education programs before covering related knowledge or skills, as well as considering organizational factors and subjective factors (e.g. understanding of each other's role in PMHC, personal interest in PMH and behavioural intent) is crucial to the translation in routine clinical practice.

As reported in the aforementioned systematic review[8], midwives in this study had negative attitudes towards their role in suicide risk assessment and suicide prevention and reported stigmatizing attitudes towards parents with suicidal ideation. This is concerning given suicide is the leading cause of maternal mortality in high-income countries[29]. In a recent systematic review of 100 articles, Groves et al.[30] identified that midwives had more mental health problems and were at increased risk of suicide compared with the general population. Staff members' personal experiences of mental health problems have been associated both with positive (e.g. stigma reduction fostering a sense of connection with the parents) and negative attitudes towards parents with PMHPs[8,9]. Relatedly, we observed some degree of difference between parents and health providers on education needs related to serious mental illness and autism. In contrast with parents with serious mental illness who reported experienced and anticipated stigma in perinatal healthcare, health providers in this study reported negative attitudes towards their role in PMHC for parents with serious mental illness and did not report related education needs - this aligning with the aforementioned systematic review[8].

Conclusion

Practical and research recommendations

Our findings support the need to promote a meaningful engagement of PWLEs to inform education interventions in PMH - this aligning with the MRC framework for designing complex interventions[12]. Education programs for perinatal health providers should therefore make an explicit focus on meeting the priorities identified by PWLEs, e.g. "*collaborate with women in developing a comprehensive plan of care that respects her preferences and decisions*"[2,25], to improve perinatal healthcare experiences for all parents.

Participants in this study formulated several recommendations for a meaningful engagement into PMHC: 1) integrating PMH into standard perinatal healthcare; 2) developing a common culture between non-MHPs and MHPs and understanding each provider's role in PMHC (e.g. shared training sessions); 3) adopting continuum approach of PMH and covering personal recovery and the positive outcomes that could be achieved through timely detection and referral; 4) improving interviewing and distress management skills. This concurs with the findings of the aforementioned systematic review[8] and the literature about stigma reduction in non-perinatal depression[24].

Professional negative experiences (e.g. undetected depression, maternal suicide during pregnancy, learning about avoidable deaths by suicide) influenced non-MHPs' engagement into PMHC. Given personal burnout and job-related stress can have a negative impact on health providers and midwives' mental health[30], education in PMH should include prevention strategies for coping with the emotional distress that could come with positive screenings.

Despite recommendations for a universal screening for perinatal depression in some international guidelines[31], suicide risk assessment does not figure in the ECMP[2]. Some PWLEs and non-MHPs in this study reported the need to assess PMH in fathers, which aligns with some research[32] but is not part of the ECMP[2]. Given midwives are at increased suicide risk[30] but report negative attitudes towards parents with suicidal ideation, covering suicide prevention in education programs in PMH could be crucial to improve service users and providers outcomes. Education programs should cover PMH in fathers, in parents with serious mental illness and in autistic parents to improve their perinatal healthcare experiences.

To conclude, improving education in PMH is a complex intervention that requires integrating the perspectives of all relevant stakeholders including persons with lived experience. Education programs should focus on providing collaborative person-centred care for all parents and the development of a common culture in PMH.

Data availability

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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Author contributions

JD and MD initiated and coordinated the project. MD, MT, ST and JD made the qualitative analysis. MD drafted the manuscript. MD and JD the literature review. CM, CD, PF and ML were involved in data collection and critically revised the article. All authors contributed to and have approved the final manuscript.

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Declarations

Competing interests

The authors declare no competing interests.

Ethical statement

The relevant Ethical Review Board (CPP-Ile de France I) approved the appraisal protocol on March 10, 2020 and all participants gave informed consent.

Additional information

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