Perinatal **M**ental Health **A**ssessment and **TR**eatment: An Evidence Synthesis and Conceptual Framework of Barriers and Facilitators to **I**mplementation (MATRIx)

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Scientific summary

Background and objectives

Perinatal mental health (PMH) difficulties can occur during pregnancy or after birth. They commonly consist of anxiety disorders, depression, post-traumatic stress disorder (PTSD), and stress-related conditions such as adjustment disorder. PMH difficulties are particularly important because of the potential negative impact on women, their partners and children. For example, they are associated with an increased risk of maternal suicide, a decline in relationship satisfaction and long-term impacts on children's development. It is therefore important that women with PMH difficulties can access care and treatment. However, research suggests only half of women with PMH problems are identified by health services and even fewer receive treatment.

This research therefore aimed to identify potential barriers and facilitators to PMH care across the care pathway, both in terms of women accessing care, as well as in terms of health services implementing new PMH assessment and treatment initiatives.

Our primary research objective was to develop a conceptual framework of barriers and facilitators to PMH care (defined as identification, assessment, care and treatment) to inform PMH services, and highlight where further research is needed. This was done through two systematic reviews which synthesised the evidence on: Review 1 (R1) barriers and facilitators to implementing PMH care; and Review 2 (R2) barriers to women accessing PMH care. Results were used to develop a conceptual framework which was then refined through consultations with stakeholders (e.g. women, GPs, midwives, health visitors, psychiatrists, commissioners, 3rd sector organisations etc). Results were used to inform recommendations for policy, practice and future research in PMH care.

Secondary research objectives were to: (i) determine the barriers and facilitators to implementing PMH care in health and social care services; (ii) identify differences in barriers and facilitators across different health and social care settings; (iii) evaluate the quality of this evidence; (iv) extract recommendations for implementation, practice and research based on the barriers and facilitators identified; (v) determine the barriers and facilitators to women accessing PMH care; (vi) evaluate the quality of these reviews; and (vii) map the geographical distribution of the research to establish generalisability and gaps in the evidence.

Review methods

For both reviews pre-planned searches were carried out in Medline (1946-present); Embase (1974-present); PsychInfo (1806-present); and CINAHL (1982-present). R2 also used Scopus and Cochrane Database of Systematic Reviews (Issue 8 of 12, August 2021). MeSH terms (i.e. prenatal care/anxiety/ diagnosis) and Boolean operators "OR" and "AND" were used.

Eligibility criteria for R1 were empirical studies that examined factors that either facilitated or impeded implementation of PMH care in health or social care services. These could be qualitative interviews with health professionals (HPs) or women about services; or studies describing the implementation of PMH care services. Eligibility criteria for R2 were reviews of literature on barriers and facilitators for women in the perinatal period (defined as conception to 1 year postpartum) to access assessment, care or treatment. Information on barriers and facilitators had to be directly drawn from perinatal women's experiences. Only systematic reviews with a PRISMA search strategy were included.

Search results were imported into Endnote and duplicates were removed. Remaining studies were then imported into Eppi-Reviewer. In R1 10% of the results were double screened. In R2 all studies were double screened. For both reviews, 10% of included studies had their data extracted in duplicate.

Methodological quality appraisal was conducted using the Joanna Briggs Critical Appraisal Tools for R1, and dual appraisal was conducted for 35% of included papers. Most studies (n=44) had a quality rating above 70% suggesting that studies were well conducted with low risk of bias. For R2, methodological quality of reviews was appraised using the AMSTAR 2 tool, and dual appraisal was carried out for all included reviews. The majority of reviews were evaluated as having low (n=14) or critically low (n=5) confidence in their results. Therefore, a qualitative sensitivity analysis was carried out to assess whether themes remained consistent across all reviews regardless of their quality rating.

Only qualitative papers were identified. Results were analysed using a thematic synthesis and mapping themes onto a systems level model adapted from Ferlie and Shortell's (2001) Levels of Change framework (e.g. individual level factors, HP factors, organisational factors and larger system factors) and then grouped to reflect different stages of the care pathway adapted from Goldberg and Huxley's (1992) Pathways to Care model (e.g. deciding to disclose, assessment, access to care, treatment).

Review results

R1 searches identified a total of 21,535 citations. After screening by title and abstract 10,130 records were excluded, leaving 931 papers to be screened by full text. Screening of full texts identified 43 studies to be included in the review. Forward and backward searches identified a further 3 papers. Therefore, 46 qualitative studies were included in the qualitative synthesis. Studies were mainly carried out in higher income countries (HICs). Implementation occurred in a wide range of settings including hospitals (n=14); primary care (n=12); and community-based care (n=12). Most studies (n=22) looked at the implementation of comprehensive care services (including screening, referral and treatment).

R2 searches identified a total of 4,086 citations. After removing duplicates and studies not meeting inclusion criteria, 2,028 articles were left to be screened. Screening by title and abstract led to 1,962 records being excluded, leaving 66 papers to be screened by full text. Screening of full texts identified 32 reviews of qualitative studies to be included in the meta-review. Reviews were conducted between 2006 and 2021. The number of studies included in each review varied from 4 to 40 with a total of 344 studies included across all the reviews. The reviews included studies carried out in 24 different countries. Most reviews focused on perinatal depression. Qualitative sensitivity analysis found that most themes were supported in both the higher quality and lower quality reviews. Including all reviews meant the data was richer and included marginalised women, such as refugees, migrants and women living in sub-Saharan Africa. This suggests results from R2 can be interpreted with reasonable confidence.

Overall, in terms of geographical distribution and type of mental illness most studies were carried out in HIC (R1: n=38; R2: n=28), and the majority focussed on perinatal depression (R1: n=32; R2: n=23).

Barriers and facilitators to PMH care were identified from R1 and R2. Results from both reviews were merged together and mapped onto seven levels informed by Ferlie and Shortell's (2001) framework. These were: (1) *Individual* factors; (2) *HP* factors; (3) *Interpersonal* factors; (4) *Organisational* factors; (5) *Commissioner* factors; (6) *Political* factors; and (7) *Societal* factors. Factors at these levels impacted on PMH care at different stages of the care pathway.

Individual level factors were the most influential in women's decision to consult. Women not understanding HPs roles (n=12), or not understanding what perinatal mental illness (PMI) is (n=14) were the most cited barriers. The largest individual level facilitator to deciding to consult was recognising something is wrong (n=8).

In terms of first contact with HPs, the most commonly cited reason for women dropping out of the care pathway was if HPs were dismissive about mental illness, or normalised women's symptoms (n=8).

Assessment of PMH was influenced by multiple factors. At the individual level, the most cited barrier was the presence of family and friends with negative beliefs about mental illness (n = 7). At the HP level, assessment specific behaviours such as carrying it out in a tick box way (n = 12) was the most cited barrier. At the interpersonal level, women and HPs being able to speak openly and honestly about assessment was the most cited facilitator (n = 5). At the organisational level, the most common facilitator was the acceptability of assessment or screening for both HPs and women (n = 17).

Women deciding to disclose their symptoms was also affected by multiple factors. At the individual level, fear of being judged as a bad mother (n = 7) was the most cited barrier. At the HP level, appearing too busy was the most cited barrier (n = 5). A lack of a trusting relationship between women and HPs (n = 10) was the most cited interpersonal barrier. Linked to this, at the organisational level, a lack of continuity of carer (n = 8) was the most cited barrier. Stigma (n = 18), culture (n = 13) and maternal norms (n = 15) were all societal level barriers preventing the disclosure of PMH symptoms.

The most commonly cited factors affecting referral were collaborative working across services (n = 7) and organisational referral procedures (n = 7).

Multiple factors influenced access to treatment. At the individual level, the most cited barriers to accessing care were logistical issues such as not having childcare (n = 14), the location of the care and difficulties travelling there (n = 13). Language barriers were the biggest interpersonal barrier to women accessing care (n = 4) and related to this, a lack of culturally sensitive care was the most cited organisational barrier to access (n = 7). At the commissioner level, the most cited barrier to access was a lack of appropriate or timely services for women (n = 11). At the political level a lack of financial resources to pay for healthcare (n = 14) was a barrier to access.

In terms of provision of optimal care, at the HP level, HPs possessing valued characteristics (n = 9), such as being trustworthy and caring, were facilitators to the provision of optimal care. At the interpersonal level a lack of trusting relationship was a barrier to optimal care provision (n = 5). At the organisational level the provision of individualised care (n = 11) that is appropriate to women's needs (n = 12) was a facilitator. A lack of training related to PMI and treatment was the most cited organisational barrier (n = 15). At the wider levels, immigration status (n = 5), stigma (n = 8), and culture (n = 6) were barriers to optimal care.

Multiple factors impacted women's experience of treatment or care. At the individual level, social isolation (n = 7) was a barrier to women's experience of care as it exacerbated their mental health difficulties further. HPs who provided hope to mothers, were caring, supportive, empathetic and went above and beyond meant women had a positive care experience (n = 9). Individualised and person centred (n = 11) care was also associated with a positive care experience.

In terms of barriers and facilitators within different health and social care settings, within hospitals the most cited factors influencing implementation were lack of time or a heavy workload (n = 8); and whether HPs were positive about the care being implemented (n = 8). In primary care, the most commonly cited factors that influenced implementation were stigma (n = 8); and family presence (n = 8). In community settings the most important factors were training (n = 8); and the characteristics of the person providing the care (n = 6).

Across low-income countries, stigma (n = 4) and lack of training (n = 4) were the most cited barriers to implementation. Similarly, when health services were located in higher income countries, but women from a refugee or different cultural background accessed them, stigma (n = 6) and lack of HP training (n = 6), along with HP's heavy workloads (n = 6) and lack of collaborative working (n = 6) were the most cited barriers.

The MATRIx conceptual framework

Results from both reviews were synthesised to develop a conceptual framework. Eight stages outlined by Jabareen were followed to develop the framework: (1) Mapping the selected data sources; (2) Extensive reading and categorising of the selected data and (3) Identifying and naming concepts; (4) Deconstructing and categorising the concepts; (5) Integrating concepts; (6) Synthesis, resynthesis and making it all make sense; (7) Validating the conceptual framework using stakeholder meetings and the CERQual approach; and (8) Rethinking the conceptual framework.

Two MATRIx conceptual frameworks were developed that highlight the importance of 66 barriers and 39 facilitators to PMH care at multiple levels that intersect across the care pathway. These conceptual frameworks informed the development of evidence-based recommendations on how to address barriers to ensure that all women are able to access the care and support they need. Recommendations were made for health policy, practice and research.

Conclusions

The MATRIx conceptual frameworks on barriers and facilitators highlight the need for women-centred, flexible care, delivered by well trained, knowledgeable, and empathetic HPs working within an organisational and political structure that enables them to deliver quality care. Results also suggest a need for international efforts to reduce stigma associated with mental health difficulties. Recommendations for practice and policy were made. While recommendations are based on the evidence they may be more or less achievable, depending on the local and national context and pressures on services.

Based on the evidence, it is suggested that policy makers: (i) review the conceptual frameworks and take comprehensive, strategic and evidence-based steps to ensure there is an effective system of PMH care; (ii) ensure services are adequately funded and there are enough trained staff in order to ensure every woman with PMH difficulties is able to access appropriate treatment in a timely fashion; (iii) improve access to healthcare for all through free healthcare and a fair and easy to access welfare system.

The evidence suggests that recommendations for healthcare practice include: (i) designing care with women to ensure it meets their needs; (ii) providing culturally sensitive care and increasing the accessibility of care through pictorial aids and translators; (iii) ensuring chosen technology is fit for purpose, and co-designed with HPs; (iv) services working together; (v) employment of enough staff from a variety of health disciplines; and (vi) HPs receiving high quality training, with protected time to complete it.

Limitations

In R1 only 10% of abstracts were double screened and given the large number of citations to screen, some papers may have been missed. Similarly, in R1 only 10% of included papers were methodologically appraised by two reviewers. Both reviews only included papers published in academic journals and written in English. Relevant reviews from health services, charities, third sector organisations and other grey literature may have been missed. Furthermore, the majority of reviews in R2 were evaluated as having low (n=14) or critically low (n=5) confidence in their results. However, this was mitigated through the use of a qualitative sensitivity analysis.

Future work

Further research is needed to examine access to PMH care for specific groups, such as fathers, immigrants or those in lower income countries. More research is needed on facilitators to implementing and accessing PMH care, as well as appropriate measures to help service managers assess whether a service is working effectively.

Study registration

Both reviews were registered on Prospero: (R1) CRD42019142854; (R2) CRD42020193107.

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