Barriers and Facilitators to Implementing Perinatal Mental Health Care in Health and Social Care Settings: A Systematic Review

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SUMMARY

The improvement of perinatal mental health forms part of the World Health Organization's Millennium Development goals. However, research suggests implementation of perinatal mental healthcare is variable. To ensure successful implementation, barriers and facilitators to implementing perinatal mental health services need to be identified. The objectives of this review were to determine the barriers and facilitators to implementing perinatal mental health assessment, care, referral and treatment into health and social care services. A systematic review was carried out by conducting literature searches in CINAHL (1982- present); Embase (1974 – present); Medline (1946- present); and PsycINFO (1806 – present). The date of the last search was 11th December 2019 and forward and backward were completed by the 31st March 2020. Studies were included if they made statements about factors that either facilitated or impeded implementation of perinatal mental health assessment, care, or treatment. Partial (10%) dual screening and data extraction was carried out. Data were analysed using thematic synthesis. A total of 46 studies were included in the review. Implementation occurred in a wide range of settings. Implementation was affected by individual (e.g. inability to attend), healthcare professional (e.g. training), interpersonal (e.g. trusting relationships), organisational (e.g. clear referral pathways), political (e.g. funding) and societal factors (stigma and culture). There are a complex range of barriers and facilitators that can support the implementation of perinatal mental health policy and practice. Perinatal mental health services should be flexible, woman-centred and delivered by well-trained healthcare professionals working within a structure that facilitates continuity of carer. Strategies that can be used to improve implementation include, but are not limited to, co-production of services, implementation team meetings, funding and coalition

building. Future research should focus on implementation barriers and facilitators dependent on illness severity, healthcare setting and inpatient care.

Keywords: Perinatal mental health; Implementation; Mental health services; barriers; facilitators

SEARCH STRATEGY AND SELECTION CRITERIA

Literature searches and study selection were conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines[36] (Appendix 1). Pre-planned searches were carried out using CINAHL (1982- present); Embase (1974 – present); Medline (1946- present); and PsycINFO (1806 – present) by NR. Boolean operators were used to combine subject headings and relevant search terms related to perinatal mental health (e.g. Depression, Postpartum), healthcare (e.g. prenatal care, postnatal care) and implementation (e.g. Implementation Science). No limits were put on language or date. The date of the last search was 11th December 2019. Forward and backward searches of included studies were carried out and completed by the 31st March 2020. For full search syntax and databases searched see Appendix 2.

Eligible studies had the following characteristics: Population: NHS and other international health or social care services for women in the perinatal period; Intervention: Implementing assessment, care, referral pathways or treatment interventions, programmes or protocols for perinatal mental health into health or social care services; Outcome: Implementation outcomes (i.e. barriers, facilitators). Studies were included if they were published in academic journals and made statements about factors that either facilitated or impeded implementation of perinatal mental health assessment, care, referral or treatment. These statements could be from qualitative interviews with healthcare professionals or women; or from studies describing the implementation of perinatal mental healthcare.

"Assessment" refers to the identification of women who have or may be at risk for perinatal mental health problems. "Care" refers to supportive care (e.g. peer volunteers or watchful waiting). "Referral" relates to referral pathways such as those provided by primary care

workers, health visitors or specialist midwives or international equivalents. “Treatment” refers to any active intervention, programme or protocol to reduce women’s perinatal mental health symptoms. “The perinatal period” was defined as from conception to one year postpartum.

Studies were excluded if they were animal research, not conducted on the target population (e.g. men/partners or children), focused on substance misuse (with different challenges for assessment and treatment), did not focus on the mental health of perinatal women, did not examine assessment, care or treatment, the interventions were targeted at parent-infant or family relationships, the papers were not primary research, the outcome was not focused on implementation, and non-English publications.

INTRODUCTION

Perinatal mental health problems affect women during pregnancy and up to one year after birth, commonly consisting of anxiety disorders, depression, post-traumatic stress disorder (PTSD), and stress-related conditions such as adjustment disorder. Many disorders are co-morbid[1,2] and severe postnatal mental illness is one of the leading causes of maternal death[2]. Perinatal mental health problems affect up to one in five women at an estimated UK cost of £8.1 billion for every annual cohort of women, with 72% of this cost attributable to the long-term impact on the child[3]. For example, anxiety and depression in pregnancy are associated with offspring being twice as likely to have a mental illness[4]. Perinatal mental health problems can also negatively impact on a child's cognitive development[5], language development[6], psychological[7], and behavioural outcomes[8]. Additionally, perinatal mental health problems can impact on a woman's relationships with her partner e.g. a decline in relationship satisfaction [9], increased strain on the couple relationship[10] and relationship breakdown[11].

Globally, maternal mental health problems are considered a major public health challenge[12]. Improvement of maternal mental health forms part of the Millennium Development Goal 5 – to improve maternal health[13]. The World Health Organization states that efforts to achieve this goal should include measures to prevent and manage mental health problems during pregnancy and after childbirth. Additionally, a mental health component should be incorporated as an integral part of maternal health policies, plans and activities in all countries[14]. Despite these recommendations there are large treatment gaps reported in both lower-middle[15,16] and higher income countries[17-19]. In the UK specifically, research which has highlighted gaps in perinatal mental healthcare[20-23] has led to the National Health Service (NHS England) pledging £365million to be spent on perinatal mental health services from 2016-2021[24] as part of the Five

Year Forward View (and similar commitment from each of the devolved governments[25,26]). Under these plans five specialist care perinatal mental health pathways[27] and NICE and SIGN Antenatal and Postnatal Mental Health Guidelines[28,29] would be fully implemented.

Guidelines on implementing these services have been developed by both NHS England in 2016[30], and the National Collaborating Centre for Mental Health in 2018[31] which state the need for multi-agency working across all levels of care and services, expansion of workforce capacity, working with providers and those with a lived experience and evidence based service plans. Despite the guidance, in April 2018 it was reported that 24% of UK women still have no access to specialist perinatal mental health services, and large areas of the UK remain without access to mother-baby units[32].

The lack of consistent implementation globally and the development of future implementation plans suggests it is both timely and important to understand what factors may affect implementation of perinatal mental healthcare. These factors are likely to occur at four levels, described by Ferlie and Shortell (2001): 1) individual; 2) care team; 3) organisational structure; and 4) the wider environment[33,34]. Further, a service may be implemented well, but factors along the care pathway may hinder access. For example, Goldberg and Huxley (1992)[35] provide a framework for understanding how a person reaches mental health services and becomes defined as mentally ill. As a person moves through the care pathway, (defined by Goldberg and Huxley (1992) as community, primary care, mental health services and mental health services admissions) there are factors that act as filters, preventing people from accessing mental healthcare. The first filter is “illness behaviour”, where a person needs to pay attention to their symptoms and then make the decision to seek help. If this is not done, this is the first “filter” out of the care pathway. The second is the healthcare professional’s ability to recognise

mental illness, third is referral onto mental health services and the last filter is admission to hospital beds. These frameworks clearly show an interplay of factors likely to affect implementation.

It is therefore important to identify the facilitators and barriers to implementing assessment, care and treatment for perinatal mental health problems into health and social care services, at individual, healthcare professional, organisational and wider environmental levels. To do this, a systematic review of the literature was carried out to identify barriers and facilitators to perinatal mental healthcare implementation and map them onto a framework to create actionable recommendations.

METHOD

Protocol

The protocol has been registered on PROSPERO (CRD42019142854).

Study selection

Search results were imported into Endnote, duplicates and ineligible publications were removed by NR. Remaining studies were imported into EPPI-Reviewer 4, where results were screened by title and abstract by NU. A proportion (10%) of the results were double screened by RW. Decisions to include or exclude were concordant between reviewers in 88.11% of cases (1037/1177). Full text screening was carried out by RW. A proportion (10%) were double screened by NU and decisions to include or exclude were concordant between reviewers in 90.90% of cases (100/110). All disagreements were discussed and resolved by RW and NU. The decision to double screen 10% was based on: The high level of agreement on screening suggesting that the inclusion/exclusion criteria were clear and that screening was accurate, the

size of the review involving 11,061 papers title/abstract and 931 full text papers, and the similar approach to double coding in other reviews[37-39].

Data collection process and data items

Data extraction was carried out by RW using EPPI-Reviewer 4 which allows for line by line coding. A new "codeset" labelled "Data Extraction" was created and contained every item to be extracted from the data (e.g. year of publication, country of study). Each paper was read in full, and relevant parts of the text highlighted (for example the country of the study) and applied to the relevant code. Partial duplication (10% e.g. 5 papers) was carried out by NU (3 papers) and HC (2 papers). Agreement was high (85%). The data that were extracted was guided by Cochrane Systematic Review for Intervention Data Collection form[40] (Appendix 3).

Critical appraisal of studies

Methodology sections of included texts were assessed for quality using Joanna Briggs Critical Appraisal Tools for Qualitative Research[41], Cross-sectional[42] and Text and Opinion[43]. Each point on the checklists can be coded into Yes/No/Unclear/Not applicable. Each tool was separated into domains that reflected the question of interest (Appendix 4). Where most questions within a domain were answered with "yes", this domain was rated as having high quality; where the majority were answered with "no" this domain was rated as having low quality. Medium quality was where there was a mixture of "yes" and "no" answers.

RW completed the assessment for the included papers and NU double coded 16 papers. NU initially screened 9 papers, which were discussed, and conflicts were resolved. Following this, the final 7 papers were screened by NU. Coders assigned the same score to papers 81.25% of the time (13/16). All disagreements were discussed and resolved by RW and NU and the final appraisal for these 16 papers is based on agreed answers.

Synthesis of results

Results were analysed by RW using a thematic synthesis[44]. Enhancing Transparency in Reporting the Synthesis of Qualitative research (ENTREQ) guidelines[45] were followed (Appendix 5). First, line by line data extraction of statements referring to facilitators or barriers to implementing perinatal mental health assessment, care and treatment was carried out. Next, codes were re-read and assigned a descriptive theme based on its meaning and content. Themes were developed and revised as each study was re-read. Once all codes had been assigned into themes, various implementation frameworks were assessed for their fit to the data (Consolidated Framework for Implementation (CFIR)[46] Reach Effectiveness Adoption Implementation Maintenance (RE-AIM)[47] and Ferlie and Shortell's Levels of Change framework[33]) in order to structure themes in a translatable way. Given the aims of the review and the emerging themes, the structure provided by Ferlie and Shortell's system levels framework was found to fit best to and was therefore used. Themes were then grouped to reflect different stages of the care pathway adapted from Goldberg and Huxley's Pathways to Care model[35] (e.g. deciding to disclose, assessment of perinatal mental health, access to care, treatment). Mapping of descriptive themes was developed deductively from the initial theoretical framework and then inductively revised as new themes emerged by RW. The mapping of descriptive themes was discussed by all review authors leading to the development of the analytical themes (recommendations). Where consistent barriers were identified (e.g. lack of training) a recommendation to overcome this barrier was made (e.g. provide healthcare professionals with training). Where consistent facilitators were identified a recommendation to utilise this facilitator was made. Following this, implementation strategies that matched the analytical themes were drawn from a dictionary of implementation strategy terms and definitions[48,49].

RESULTS

Database searching identified a total of 21,535 citations. After removing duplicates, and ineligible publications, 11,061 citations were left which were screened by title and abstract. The full texts of 931 papers were screened. This left 43 studies to be included in the review. Forward and backward searches identified a further 3 papers. Therefore, 46 studies were included in the qualitative synthesis (Figure 1).

Included studies were heterogenous with different samples, sample sizes, assessment, care or interventions being implemented, the country of origin and the methodology used to assess implementation barriers and facilitators. Studies were mainly (n = 39) carried out in higher income countries[50] with well-established highly ranked healthcare systems[51] most commonly the USA (n = 16). Implementation occurred in a wide range of settings including hospitals (n = 14); primary care (n = 12); community-based care (n = 12); online or remote (n = 3); maternity care (n = 3) and specialist perinatal mental healthcare (n = 2). No studies examined implementation in social care settings. Most of the studies (n = 22) looked at the implementation of comprehensive care services (including assessment, referral and treatment); 18 studies were about the implementation of interventions and six were about assessment only.

Ten papers described the implementation of perinatal mental healthcare: one was a cross-sectional qualitative survey of healthcare professionals, and the remaining papers (n = 35) interviewed key stakeholders (healthcare professionals (n = 19); women (n = 9); both (n = 7)) about their views and experiences on the implementation of care. Sample sizes ranged from 6-809 with a mean of 46.81; Median = 24; IQR = 16.25 – 33.35 (Appendix 6).

For the qualitative studies, all but one text had high quality in the design and methodology domain. All studies had high quality in the interpretation of results domain. Most

studies (n = 28) had high quality in the participants domain, the remaining had medium quality. For the researcher influence domain, only four studies had considered the impact of the researcher on the participants and had located the researcher culturally and theoretically, therefore only four studies were rated as high quality in this domain, the rest were rated as medium (n=8) or low quality (n=25). For text and opinion, all papers had high quality in all domains (author credentials; opinion development; literature support). The cross-sectional study had high quality in methodology and analysis, but medium for the participant domain (Appendix 4). All studies remained for inclusion in the review. However, themes extracted were those supported by higher quality papers; none were substantiated solely by lower quality papers.

Definitions of descriptive themes can be found in Appendix 7. Barriers and facilitators to implementation were influenced by individual, healthcare professional, interpersonal, organisational, political and societal factors, as well as the type of care implemented and beliefs about medication. A system-level figure of the results can be found in Figure 2. Each level of these factors maps on to at least one part of the care pathway (Figure 3). More detailed information of how each of these system factors are mapped onto the care pathway can be found in Appendix 8. Each system level factor will be outlined below, and within each, barriers and facilitators will be presented following the chronology of the care pathway outlined in Figure 3 (see Table 1 for reflective quotes). Although design and delivery of care is a sub-theme for organisational factors, it will be described separately due to the quantity of studies (n = 38). An analysis of the barriers and facilitators across different health and social care settings can be found in Appendix 9.

Individual level barriers to assessment were the presence of a partner (n = 3); a lack of awareness or knowledge about perinatal mental health problems (n = 3) and additional personal

difficulties (n = 3). During assessment, a barrier preventing women from disclosing was family presence, or family beliefs about mental illness (n = 4). Once a woman was offered treatment, a barrier to accessing this was a reluctance or inability to attend (n = 14) due to lack of time, childcare and transport. Other factors that impacted access to treatment included additional personal difficulties (n = 4) and lack of family support (n = 2). After a woman had accessed treatment, there were many individual level factors that could act as barriers to a positive perception of the treatment offered. These included health beliefs (n = 2); psychological readiness (n = 2); symptoms of psychological difficulties (n = 2); additional personal difficulties (n = 4) and lack of family support (n = 5).

At the healthcare professional level, having someone to be women's advocate during their first contact facilitated further contacts (n = 2). On the other hand, disinterested or rude staff (n = 4) were barriers to care. During assessment, the most widely cited barriers to implementation was lack of, or poor training (n = 8); and heavy workloads or lack of time (n = 13). Facilitators for assessment were having a dedicated person to carry out assessment (n = 3) and good supervision/support (n = 3). Referral on to other services was influenced by many factors, but the most frequently cited barriers were a lack of collaborative working (n = 3) and poor communication between healthcare professionals (n = 3). The most frequently reported barriers to the provision of optimal treatment were lack of confidence (n = 7); lack of, or poor training (n = 5), lack of collaborative working (n = 10) and heavy workloads/lack of time (n = 9). The most cited facilitator to the provision of optimal care was the characteristics of the healthcare professionals (n = 13), those who were open, non-judgmental, willing to listen and motivated were valued by women.

At the interpersonal level, during assessment, the most common barriers were language barriers (n = 8) and a lack of open and honest communication (n = 5) between women and healthcare professionals. Facilitators to assessment were the development of a trusting relationship (n = 6) and open and honest communication (n = 5). On the other hand, a lack of a trusting relationship acted as a barrier to disclosure (n = 2). The most cited barriers to provision of optimal care was a lack privacy and confidentiality (n = 5) and lack of continuity of carer (n = 3). The most common facilitator was the development of trusting relationships (n = 7).

Women's reluctance to take medication influenced their decision to consult (n = 3) and one study reported women stating that they did not need help during assessment because they did not want to be offered medication. Midwives and nurses sometimes avoided referring women to their General Practitioner as they believed that women would be prescribed medication. Furthermore, beliefs about medication were reported to impact on optimal care in three studies.

At the organisational level, during assessment, clear workflow procedures were the only cited facilitator for implementation (n = 2), whereas unclear workflow procedures were the only cited barrier (n = 5). Referral onto other service was negatively affected by unclear or complicated referral pathways (n = 9). Lack of timely and appropriate services to refer women on to were also a barrier to referrals being made (n = 8). In addition, the lack of appropriate services acted as a barrier to women accessing treatment (n = 9). Service integration was a facilitator to women receiving optimal care (n = 3). The most common barriers to women receiving optimal care were unclear workflow procedures (n = 5) and a lack of resources (n =3).

In terms of design and delivery of care, barriers to assessment included issues with technology (n = 3), wording of screening tools (n = 3) and healthcare professional's negative perception of assessment (n = 4). Facilitators included a flexible (n = 4) and patient-centred (n =

5) delivery. Where technology was working effectively, this was a facilitator (n = 6), as was healthcare professional's positive perception of assessment (n = 7). Facilitators to women accessing care included home setting (n = 5), and the provision of practical support such as transport or childcare (n = 7). Barriers to women receiving optimal care included inappropriate treatment for women's needs (n = 5), delivery in a healthcare setting (n = 5), and the timing of delivery e.g. delivered too fast, or not enough sessions (n = 4). The most cited facilitators to optimal treatment included flexible (n = 6) and face-to-face delivery (n = 3), provided by healthcare professionals who had a positive perception of the care being offered (n = 9). The way women experienced the intervention was influenced by whether she had choice over the intervention offered (n = 4); and her perception of the intervention (n = 5).

At the political level, two studies cited changes in policy that led to difficulties implementing perinatal mental healthcare. Furthermore, lack of funding was cited by 10 studies as a barrier and impacted referral, assessment, access to treatment and provision of optimal treatment.

At the societal level, stigma was a barrier to implementation across the care pathway in terms of deciding to consult (n = 4); assessment (n = 7); referral (n = 3); access to treatment (n = 3); receiving optimal treatment (n = 2) and women's experience of treatment (n = 2). Cultural factors (e.g. culture of the country or mothers and language) also acted as a barrier to implementation across the care pathway with regards to deciding to consult (n = 4); assessment (n = 5); referral (n = 1); receiving optimal treatment (n = 3) and women's experience of treatment (n = 2).

The descriptive themes were used to identify analytical themes (recommendations) and these were used to develop implementation strategies. Recommendations are related to the

design of the care, healthcare professional, organisational, political and societal factors. Recommendations are matched with implementation strategies drawn from Expert Recommendations for Implementing Change (ERIC)[48] and Powell et al. (2012)[49] (Table 2).

DISCUSSION

This systematic review identified a wide range of barriers and facilitators to perinatal mental healthcare implementation, that were influential at different levels (e.g. individual, healthcare professional, organisational) and across the care pathway (e.g. decision to consult, assessment, access to treatment). Barriers at the individual level included no family support surrounding mental health, lack of awareness or knowledge about perinatal mental health, beliefs about medication, reluctance or inability to attend mental health services and additional personal difficulties. These barriers are in line with the 'illness behaviour' filter on the pathway to care outlined by Goldberg and Huxley (1992)[35] and previous systematic reviews[37,79].

At the healthcare professional level, a facilitator to implementation was healthcare professionals having a positive perception of the care provided, for example, where healthcare professionals internalised the value and importance of assessment, they would be more likely to assess women. This is in line with several implementation theories, such as the internalisation aspect of the Normalization Process Theory[80-81], the Diffusion of Innovation Theory and the Technology Acceptance Model which both posit that users' perceptions of an innovation are important for their decision to use an innovation[82-84]. Other facilitators to implementation were healthcare professionals who were genuinely interested in women, took time to listen and were kind and caring. This genuine interest in women suggests that intrinsic motivation, which is where individuals perform a certain action or behaviour for personal satisfaction without any external reward (e.g. praise or money)[85], may play an important role in the implementation of perinatal mental healthcare. Healthcare providers are increasingly utilising payment for performance models[86,87], such as the payment by results system used within the NHS to improve

implementation. These models are based on performance due to extrinsic motivation, and while there is some evidence that this method works[86], the results from this review did not reflect this.

Barriers to implementation at the healthcare professional level were lack of knowledge and training, in line with findings from other systematic reviews[37,79,88,89]. It is therefore important all healthcare professionals who come into contact with women during the perinatal period are given training on perinatal mental health identification and treatment.

At the design and delivery of care level, having a dedicated person to guide women through the service, or to be in charge of assessment or referrals was a facilitator to implementation. This finding is in line with the PARIHS framework of implementation which posits that a key factor for successful implementation is facilitation. This is usually achieved by an individual or team who either work to achieve a specific task, or work in a more holistic way to ensure implementation occurs[90].

At the organisational level, lack of clear referral pathways and of appropriate services to refer women to, were the most frequently cited barriers. Linked to this is the finding that the largest political level barrier to implementation was lack of funding. Lack of governmental interest in a service is likely to be reflected in little or no policy support or funding. Further, other factors such as a restructure of healthcare services can be barriers to implementation[91,92]. These barriers have been found in other systematic reviews relating to perinatal mental health[37,89] and clearly show the need for adequate funding and policy to enable perinatal mental health service provision.

Stigma and cultural beliefs were societal barriers to implementation, and they had an effect across the entire care pathway. Furthermore, the most commonly cited barrier in studies carried out in low income countries (Appendix 9) or with women from a refugee or minority

ethnic background was stigma. A meta-ethnography of 12 studies supports this finding, with one of the identified themes relating to women from migrant backgrounds being too embarrassed or afraid to talk about their mental health as they were concerned they would be seen as 'crazy' or 'unfit mothers'[93].

Based on these findings, future practice should focus on the design and implementation of innovative perinatal mental healthcare services/interventions that aim to overcome these barriers. For example, the review found that facilitators to implementation were women having choice over their care, and care that is appropriate, woman-centred, and flexible. To fully understand what women need in terms of appropriate care, flexibility and choice, care should be designed with women at the centre and/or co-produced, with women with lived experience of perinatal mental ill-health. One potential way this could be done is by following the example of a UK based co-production service (Croydon Service User Network), where both the design and delivery of care is carried out by professionals and service users. This is a network where members participate in the running of the service, feedback their opinions and work alongside staff to help in the running of the groups[94]. In addition, services could utilise toolkits such as "The Co-Production Star" which "enables organisations… to map how much co-production is already taking place, improve existing co-production approaches, identify the potential for new approaches and scale out co-production across services and communities"[95]. Future research should consider the development of co-production of perinatal mental health services.

New clinical teams should be created with a wide range of disciplines, which allows women choice in the care they receive. Increasing the flexibility and accessibility of services should be done through offering home visits and where this is not possible, providing out-of-hours appointments that are located in an area with good transport links, and an accessible

building to allow for pushchairs, or provision of virtual consultations using web-based platforms such as NearMe or Livi. The identification and building of working relationships and networks with other services, who give free information and advice about money, the law, housing and consumer rights, can improve resource sharing, problem solving and ensure women are offered holistic care. Increasing accessibility of care to women who are unable to, or have difficulty speaking the country's official language, needs to be facilitated through coalition building with interpreting agencies. Technology can be a facilitator to implementation, and this should be co-produced with healthcare professionals and women, to ensure ease of usability and integration into the workflow.

Healthcare professionals should be provided with necessary training in order to provide a high-quality service. Ensuring healthcare professionals provide innovative care can be encouraged through creating accreditation or membership requirements and creating a learning collaborative. Healthcare professionals need to work in an organisation that supports their efforts to provide high quality perinatal mental healthcare. Involving executive boards and ensuring healthcare professional implementation team meetings will encourage managerial understanding and should therefore promote effective implementation.

Funding is required to ensure high quality care provision. Funding needs to be available, easily accessible, and ring-fenced at local level in order to prevent essential perinatal mental health funds being diverted to other local services[96]. Funding structures may need to be revised depending on the needs of the community in which the service is delivered (e.g. affordable health insurance where free healthcare is not available). Furthermore, the building of a coalition of health visitors, midwives, general practitioners, Improving Access to Psychological Therapies

practitioners, psychologists and psychiatrists is needed to encourage referral and reduce the risk of women falling through care pathway gaps.

Limitations: The decision was made to double screen 10% of abstracts and given the large number of citations to screen, some papers may potentially have been missed, although the high concordance of the double screening makes this seem unlikely. Similarly, only 10% of the included papers had dual critical appraisal which may have influenced the quality of this appraisal, although no papers were rejected on the basis of quality. Only studies published in academic journals and English language studies were included. Relevant reports from health services, charities or third sector organisations may have been missed. This review does not address severity of illness in implementation and papers mainly focused on the majority of women who do not reach the threshold for referral to specialist services, such as for severe mental illness and psychosis. In order for the system to be effective in producing better outcomes, it needs to address the entire spectrum of illness. Future research should therefore focus on implementation of perinatal mental healthcare services for all illness severities. Further, healthcare systems across the world have different service provision related to perinatal mental health. Although the barriers identified in this review are related to a variety of service structures, there may be implementation barriers that are more relevant in specific health systems, such as free healthcare vs paid healthcare. Lastly, no research was identified that focused on the fourth filter of the Goldberg & Huxley[35] model, admission to hospital beds. Given the large gaps in inpatient perinatal mental health service provision across the UK and globally[97-99], future research is needed that focusses on the implementation of mother-baby psychiatric units, or international equivalents.

Overall, the findings from this review point to a complex interplay of individual and system level factors across different stages of the care pathway that can influence effective implementation of perinatal mental healthcare. The identified barriers and facilitators point to the need for women-centred, flexible care, delivered by well trained, knowledgeable, and empathetic healthcare professionals working within an organisational and political structure that enables them to deliver continuity of carer. The identification of these barriers and facilitators can support the implementation of perinatal mental health policy and practice internationally. Future research should focus on identifying implementation barriers and facilitators dependent on illness severity and type of healthcare service provision, and implementation of inpatient perinatal mental healthcare.

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