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Midwives' perceptions and experiences of caring for women who experience perinatal mental health problems: An integrative review

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Abstract

Background:

Perinatal mental health is an important public health issue and consideration must be given to care provision for effective support and care of women in the perinatal period.

Aim:

To synthesise primary research on midwives' perceived role in Perinatal Mental Health (PMH).

Design:

Integrative review.

Methods:

Whittemore and Knafl's (2005) framework was employed. A systematic search of the literature was completed. Studies were included if they met the following criteria: primary qualitative, quantitative and mixed methods research studies published in peer reviewed journals between January 2006 to February 2016, where the population of interest were midwives and the outcomes of interest were their perceived role in the management of women with PMH problems. The methodological quality of studies was assessed using the relevant CASP (Critical Appraisal Skills Programmes) criteria for quantitative and qualitative

research studies. Data extraction, quality assessment and thematic analysis were conducted.

Findings:

A total of 3323 articles were retrieved and 22 papers were included in the review (15 quantitative, 6 qualitative and one mixed method study). The quality of the studies included was good overall. Two overarching themes emerged relating to personal and professional engagement. Within personal engagement four sub themes are presented: knowledge, skills, decision making and attitude. Within professional engagement four themes are presented: continuous professional development, organisation of care, referral, and support.

Conclusions and implications for practice:

The findings indicate midwives require continuous professional development opportunities that address knowledge, attitudes to PMH, communication and assessment skills. However educational and training support in the absence of appropriate referral pathways and support systems will have little benefit.

Keywords: midwife, perinatal mental health**,** attitudes, screening, integrative review, synthesis

Introduction

While the perinatal period is primarily perceived as a time of joy it can also pose physical, biological and emotional challenges (Howard et al., 2014ab). Multifactorial reasons including biological changes, obstetric related factors, stressful life events and inadequate social support can significantly impact on maternal mental health (Kulkarni, 2010). Perinatal mental health (PMH) relates to the mental well-being of women during pregnancy and up to one year after birth (Austin, 2003; Austin et al., 2008; Galbally et al., 2010; Howard et al., 2014b). Women may experience a broad range of mental health difficulties including mood, anxiety and psychotic disorders during the perinatal period (Paschetta, 2014). Internationally PMH is acknowledged as an important public health issue with international estimates indicating that between 10-25% of women will experience depression and 25-45% anxiety during this time (Fisher et al., 2010; Rallis et al., 2014a). A number of adverse

outcomes are associated with perinatal mental health problems (PMHPs). These include recurrent depression, increased risk of psychosis, less responsive care giving, increased risk of suicide (Knight et al., 2014), epigenetic modifications, preterm birth, low birth weight (Grote et al., 2010), adverse effects on infant's cognitive and socio-emotional development (Glasheen et al., 2010; Kingston et al., 2012), paternal perinatal depression and poor relationship satisfaction (Wee et al., 2011).

The perinatal period is a time of increased healthcare utilisation (Sockol et al., 2013) and offers midwives a unique opportunity to screen for PMH risk factors, ensure early detection and early intervention (Milgrom et al., 2008). However due to a myriad of factors PMH remains unrecognised and therefore untreated (Priest et al., 2008). Factors such as a reluctance of women to disclose how they are feeling, lack of recognition of the signs of PMHPs by women and healthcare professionals and a reluctance of professionals to identify women because of lack of skills or resources all contribute to unrecognition and under treatment (Priest et al., 2008).

The aim of this review is to explore midwives' perceptions of their role in PMH. The following two questions formed the basis of the review: (1) what are the experiences and perceptions of midwives supporting women with PMHPs? and (2) what supports a midwife in their role supporting women with PMHPs?. Findings from this review will inform future research, practice and policy initiatives (Whttemore and Knafl, 2005).

Methods

This review integrated evidence from qualitative, quantitative and mixed method research and was informed by Whittemore and Knafl's (2005) framework in which methods of a review are reported in five stages (problem identification, literature search, data evaluation and extraction, data analysis, and presentation of results).

Stage 1: Problem identification:

A clear problem identification and review purpose were essential to provide focus, boundaries and facilitate all stages of the review. This was facilitated through the use of PEO where midwives were taken as the Population, PMHPs taken as the Exposure and perception(s)/experience(s) taken as the Outcome. Exploratory investigations highlighted a number of different terms encompassing PMHPs such as depression, anxiety, post-traumatic stress disorder and reviewing the broad range of PMHPs were central to providing a comprehensive understanding. Search parameters to guide the inclusion of papers are presented in Table 1. The time period January 2006 to February 2016 was identified as appropriate to ensure comprehensive coverage and currency of relevant literature and reflect developments and midwives' perceptions over time. This time period captures the recent global position statement in favour of universal perinatal psychosocial assessment (International Marce Society, 2013), international guidelines (Beyond Blue, 2011; Scottish Intercollegiate Guidelines Network, 2012; National Institute for Clinical Excellence NICE, 2014) and a growing body of PMH research.

Stage 2: Literature search

The Cochrane Database of Systematic reviews, MEDLINE, CINAHL, PsycINFO, EMBASE, SCOPUS, and Web of Science were searched based on the search parameters and an example of the search used in PsycINFO is outlined in Table 2. This was complemented with an ancestry search of the reference lists of the identified studies.

Stage 3: Data evaluation and extraction

Studies were appraised using the Critical Appraisal Skills Programmes Checklists for qualitative and quantitative research and each individual criterion was reported as met, unmet or unclear (Table 4). However, as the review sought to explore the totality of evidence relating to midwives' role in PMH, no disqualifications were made on the grounds of quality rather the quality assessment process assisted in building a picture of the underlying assumptions and methods that currently characterise the field. Initial data extraction captured the study characteristics including, setting, study design, sample strategy, data collection and summary of main findings identified in the research and subsequent data extraction collated findings (Table 3). Quantitative papers that reported

qualitative data were jointly extracted and the focus was on the quantitative results e.g. McCauley et al., 2011.

Stage 4: Data analysis

Data were ordered, coded, categorised and summarised into a unified and integrated conclusion. Themes were identified from each study and synthesised to form final themes. This was an iterative process of engagement and reengagement with the studies and co-authors where the extracted information was compared and patterns recorded as they became apparent. This comparative analysis process was further scrutinised, from which it was possible to discern groupings of similar information and the identification of two key themes (Table 5).

Stage 5: Presentation of results

The results of the search process are presented using a flow diagram (Fig 1) where twenty-two articles representing nineteen unique studies were reviewed. These comprised fifteen quantitative studies [descriptive surveys (n=13) and before and after survey design (n=2)], six qualitative studies [one ethnography, four qualitative descriptive, one naturalistic enquiry] and one mixed methods study. One study published its results across three papers (Jones et al., 2011, 2012a, 2012b). Lau et al., (2015a) and Eilliot et al (2007) presented findings of their study across two papers. The articles country of origin included Australia (n=10), United Kingdom (n=7), Slovenia (n=2), USA (n=1), Netherlands (n=1) and Sweden (n=1). The total number of midwives included across studies was 3475.

Studies that examined healthcare practitioners' perceptions where included where midwives' perceptions could be clearly identified for example Buist et al., (2006) and excluded if midwives' perceptions could not be clearly identified for example Stanley et al., (2006), Gunn et al., (2006) and Yelland et al., (2007). Studies that examined psychosocial assessment defined by Yelland et al., (2007, p288) as 'the process of exploring who is at risk of increased risk of adverse outcomes particularly those of psychological nature' were included in this review (Mollart et al., 2009; McLacklan et al., 2011).

Quality appraisal of qualitative studies

Overall studies were found to be of good methodological quality. Table 4a displays the findings of the critical appraisal process including the qualitative aspect of the mixed method study. All studies identified research aims, appropriateness of design, clear statements of findings and outlined the value of their research. However, qualitative studies were unclear regarding: data saturation (n=7), acknowledgment of the researcher/participant relationship (n=6) and ethical considerations including an explicit statement of ethical approval and informed consent (n=4).

Quality appraisal of quantitative studies

Table 4b displays the methodological quality of the quantitative studies including the quantitative element of the mixed method study. The objectives, design and sample were clear across studies. Response rates varied between 21.6% and 81.5% and consisted mainly of convenience samples (n=12). A variety of measures were utilised to examine midwives' perceptions of PMH and no consistent measure was used in more than one study. Four papers did not have an explicit statement that ethical approval was obtained for the study (Lees et al., 2009; Elliot et al., 2007; Ross-Davie et al., 2006; Skočir and Hundley, 2006). The validity and reliability of measures was not clear in eight studies.

Narrative synthesis

The findings across studies were explored using thematic analysis. Some studies are represented in more than one theme as they had several relevant findings. Two overarching themes emerged personal and professional engagement. Table 5 displays the overarching themes and subthemes that were identified. Personal and professional engagement emerged as the two overarching themes. Within personal engagement four subthemes are described: knowledge, skills, decision making and attitude. Within professional engagement four themes are presented: continuous professional development, organisation of care, referral, and support.

Personal engagement

This theme presents personal engagement in which midwives' knowledge, skills, decision making and the attitude towards PMHPs determine their level of engagement in PMH care.

Knowledge

Knowledge was addressed within both qualitative and quantitative studies. Through the use of knowledge scales and vignettes midwives reported a higher level of knowledge on depression and anxiety however, their knowledge rated/scored lower on severe mental health problems (SMHPs) such as; schizophrenia, post-traumatic stress disorder (PTSD), and bipolar disorder (Buist et al., 2006; Jones et al., 2011; Hauck et al., 2015). Lack of knowledge was also evident within qualitative studies where midwives including those with specialist PMH roles identifying that they lacked knowledge to manage PMHPs and in particular across cultures (Mivesk et al., 2008; Edge, 2010). This lack of knowledge impacted on midwives' engagement and confidence to provide care (identification, screening and referral) (Saunders 2006; Skočir and Hundley, 2006; Ross-Davie et al., 2006; Elliot et al., 2007; Jomeen et al., 2009; Lees et al., 2009; Edge, 2010; McCauley et al., 2011; Hauck et al., 2015).

Skills

In twelve studies, midwives identified the skills they required to undertake a role in PMH. These included communication skills such as asking questions, listening (Ross-Davie et al., 2006, McCauley et al., 2011; Hauck et al., 2015), liaising with the partners (Gibb and Hundley, 2009, Hauck et al., 2015), screening (Jones et al., 2011; Fontein-Kuipers et al., 2014; Hauck et al., 2015), management (Ross-Davie et al., 2006; Jones et al., 2011), teamwork (Ross-Davie et al., 2006; Edge, 2010; Hauck et al., 2015), and counselling (Ross-Davie et al., 2006; Gibb and Hundley, 2007; Nyberg et al., 2010; McCauley et al., 2011). Further education on the skills necessary to identify and respond to women who experience PMHPs was identified as essential to support midwives in practice (McCauley et al., 2011; Rollans et al., 2013; Fontein-Kuipers et al., 2014; Hauck et al., 2015).

Decision making

The requirement to make decisions relating to the identification of women at risk or currently experiencing PMHPs, planning care and making appropriate referral was evident across eleven studies. Midwives clinical decision making was influenced by their clinical skills including the use of screening tools (Jones et al., 2011; Jones et al., 2012ab; Fontein-

Kuipers et al., 2014; Hauck et al., 2015), professional judgement (Gibb and Hundley, 2009; Edge, 2010; Rollans et al., 2013) and clinical wisdom (Gibb and Hundley, 2009; Edge, 2010).

Screening tools used by midwives included the Edinburgh Postnatal Depression Scale (EPDS) (Jones et al., 2011; Jones et al., 2012ab; Rollans et al., 2013; Hauck et al., 2015), Edinburgh Depression Scale (EDS) (Rollans et al., 2013), Psychosocial Assessment Questionnaire (Rollans et al., 2013), and the Structured Antenatal Psychosocial Assessment (SAPSA) (Mollart et al., 2009) to engage women and support decision making. Midwives utilising the EPDS found it useful for screening (97.3% Jones et al., 2012b) and reported a high intention for its continued use in practice (94.9% Jones et al., 2012b). However, midwives did not possess a good understanding of the functions and limitations of the EPDS (Jones et al., 2011; McCauley et al., 2011; Hauck et al., 2015) with just 13.4% of midwives identifying the EPDS as a screening tool (Hauck et al., 2015).

Rollans et al., (2013) observed 34 booking visits undertaken by 16 midwives and two student midwives who used a structured psychosocial assessment tool and the EDS to assess women's risk factors and current mental health. They identify that midwives employ a range of skills utilising two approaches to psychosocial assessment; the structured approach and the flexible approach. The structured approach involved midwives directly reading the questions from the assessment tool and in the flexible approach midwives modified the wording and timing of the questions to assist the interpretation and comprehension of the questions. Here the flexible approach appeared to support a reciprocal exchange between the woman and midwife. While midwives may ask about a past history of PMHPs and explore the responses to questions, Rollans et al., (2013) observed that debriefing (defined as the midwife offering a woman support or inviting the woman to talk further or reflect on any issues or concerns raised) during the interview, occurred in only four out of 34 interactions which suggests a lack of a holistic approach to PMH care. In the only study that investigated attitudes to suicide, midwives in Lau et al., (2015a) study reported not feeling comfortable assessing for suicide risk.

Some study sites did not employ psychological screening tools and in these settings midwives relied upon their professional judgement and clinical acumen to screen women

(Skočir and Hundley, 2006; Gibb and Hundley, 2007; Mivesk et al., 2008). To this end midwives drew on behavioural and interpersonal communication signals such as: extreme or obsessive behaviours about self, baby or house, wanting to detain the midwife, and the quiet woman (Gibb and Hundley, 2007) to identify concerns about psychosocial wellbeing. However, while midwives used their professional judgement they had difficulty articulating their views and how their judgements were formed reflecting the role intuition plays in decision making to assess psychosocial wellbeing (Gibb and Hundley, 2007; Edge, 2010).

Confidence affected midwives' ability to screen women for PMH (Fontein-Kuipers et al., 2014) and this confidence is displayed in midwives' ability and comfort in asking question regarding woman's mental health. Three studies (Ross-Davies et al., 2006; Sanders, 2006; Jones et al., 2012a) reported that 72.4%, 77% and 91% of midwives felt comfortable questioning women about emotional disorders. They were less confident as what to do when a woman disclosed a history of a current or past mental health problem (Ross-Davies et al., 2006) or that they could support a woman with depression (Sanders, 2006).

Attitude

Essential within a midwives' role is their willingness to assume their responsibility for PMH care and this influences their professional behaviours (Fontein-Kuipers et al., 2014). While generally midwives acknowledge their role in PMH (Ross-Davie et al., 2006; Skočir and Hundley, 2006; Sanders, 2006; Rothera and Oates, 2011, Jones et al., 2012a; Fontein-Kuipers et al., 2014; Hauck et al., 2015), there is a view among some midwives that it's the responsibility of the social worker, general practitioner, obstetrician or specialists PMH services (Mivesk et al., 2008; Mc Cauley et al., 2011).

Six studies identified that a negative attitude to women with PMHPs impacts on professional behaviours in particular through negative stereotyping (Skočir and Hundley, 2006; Gibb and Hundley, 2007; Jomeen et al., 2009; Lees et al., 2009; McCauley et al., 2011; Hauck et al., 2015). Midwives reported that women with PMHPs were difficult to manage (McCauley et al., 2011), women with a SMHP should be encouraged not to have children (Skočir and Hundley, 2006; Hauck et al., 2015), and women with SMHPs should not be allowed to keep their babies (Hauck et al., 2015). These attitudes translated into practice through the

midwife viewing women with PMHPs as being low in warmth and competence (Hauck et al., 2015), midwives avoiding women with PMHPs (McCauley et al., 2011), stigmatising women leading to stereotypical generalisations e.g. 'professional woman', 'perfectionist' (Gibb and Hundley, 2007). On the other hand, stigmatised attitudes can be expressed in the form of midwives identifying a desire to protect woman from being 'labelled' as one of the reasons for not recording a mental health history and referring women to interdisciplinary services (Lees et al., 2009; McCauley et al., 2011).

Professional engagement

Within professional engagement four sub-themes are presented: continuous professional development, organisation of care, referral, and support are addressed.

Continuous professional development

Two studies reported that while midwives received some training on PMH in their midwifery pre-registration education (Jomeen et al., 2009; Jones et al., 2011), this is limited and greater depth is required on assessment and management of women with PMHPs (Jones et al., 2011; Rothera and Oates, 2011). Furthermore, while the length of education and training is inconsistent and inadequate (Jomeen et al., 2009), there was limited post registration PMH education available (Ross Davie et al., 2006; Jomeen et al., 2009; Lees et al., 2009; Jones et al., 2011; Rothera and Oates, 2011). The reasons for describing education as inadequate were not explored and where midwives had completed post registration education on PMH this did not always appear to influence their confidence levels in supporting women (Hauck et al., 2015). However, midwives who had undertaken a one-day mandatory post registration training on PMH with a practical component on asking initial and extension questions reported significantly increased knowledge and confidence in advising and caring for women (Elliot et al., 2007). Similarly, McLachlan et al., (2011) found that an advanced communication skills education package on postnatal psychosocial issues increased self -reported comfort and competency in the identification, care and referral of women with psychosocial issues during the postnatal period. This programme was delivered over a 10-week period and consisted of two hour workshops with an emphasis on skills development.

Topics and preferred format of continuous professional development (CPD) identified across articles are summarised in Table 6. In addition, the provision of clinical supervision and mentoring were identified as important (Mollart et al., 2009; Nyberg et al., 2010). Midwives who had accessed clinical supervision found it beneficial in providing a space for sharing concerns and debriefing with an independent professional. In addition, mentoring was a necessary support enabling midwives continue their work with women experiencing PTSD (Nyberg et al., 2010).

Organisation of care

Organisation of care was represented in eleven papers and addressed issues related to time and models of care. Time constraints were a major barrier to effective support (Ross-Davie et al., 2006; Saunders et al., 2006; Elliot et al., 2007; Mivšek et al., 2008; Lees et al., 2009; Edge, 2010; McCauley et al., 2011; Jones et al., 2012a). The challenges of identifying PMH in busy antenatal clinics such as lack of time and the absence of clearly defined care pathways were identified (Ross-Davie et al., 2006; Lee et al., 2009; Edge, 2010; Rothera and Oates, 2011; Jones et al., 2012a,b). Midwives in antenatal clinics indicated detection was more likely in postnatal wards however those on the postnatal wards stated it was virtually impossible to identify depression because of short hospital stays (Mivšek et al., 2008; Edge, 2010). Midwives identified that the antenatal booking appointment served as an opportunity to identify risk factors for PMH (Lees et al., 2009), although in practice midwives stated that this appointment was too short and already packed with too much information to undertake a comprehensive PMH assessment with the woman (Lees et al., 2009). However, the notion of adequate time to conduct an assessment is supported by Rollans et al., (2013) who observed psychosocial assessments among thirty-four participants in two sites and in Jones et al., (2012a) who reported 55.9% of respondents had time to assess women's emotional health and 75.2% did not find emotional problems too time consuming. In instances where assessment difficulties were identified midwives felt pressure to prioritise care to focus exclusively on SMHPs (Edge, 2010).

The organisation of care includes the availability of continuity models of care where a named midwife follows women throughout pregnancy, birth and the postnatal period. This

process was identified as important in the context of detecting PMHPs (Ross-Davie et al., 2006; Skočir and Hundley, 2006; Gibb and Hundley, 2007; Mivesk et al., 2008; Edge, 2010; Jones et al., 2012a). This care approach supports midwives to establish relationships and make decisions about the psychosocial well-being of women more accurately due to their knowledge of the woman from previous encounters (Gibb and Hundley, 2007; Mivesk et al., 2008; Edge, 2010; Jones et al., 2011).

Referral

Once an assessment is complete appropriate referral is essential to prevent over saturation of a mental health service (Reilly et al., 2013). Across eleven articles referral was affected by lack of: required skills to identify, assess and care for women, availability and use of psychosocial assessment tools, timely access to clearly defined care pathways, specialist PMH teams and knowledge of available options, (Ross-Davie et al., 2006; Skočir and Hundley, 2006; Jomeen et al., 2009; Edge, 2010; McCauley et al., 2011; Rothera and Oates, 2011; Jones et al., 2012b; Hauck et al., 2015). These issues led to over or under referral of women to the community and specialist PMH services (Jomeen et al., 2009; Lees et al., 2009).

Support

Support was raised within three papers. The primary focus of the study by Mollart et al., (2009) was the emotional impact of conducting psychosocial assessment and screening. Identifying repeated disclosures of sensitive information impacted on midwives emotional wellbeing, professional capacity to support women, and personal lives. In addition, Edge, (2010) highlighted the emotional impact of psychosocial assessment including guilt and anxiety when midwives were not able to meet the needs of women with PMHPs. The main source of available support identified in the articles was peer-support from midwifery and obstetric colleagues (Mollart et al., 2009; Nyberg et al., 2010). However, the type of support required was not explored and midwives identified the limitations of the support available due to the fact that colleagues were also dealing with similar issues, had workloads and were not fully available to them (Mollart et al., 2009).

Discussion

This integrative review of 22 papers explored the experiences and perceptions of midwives' role in supporting women with Perinatal Mental Health Problems (PMHPs). Two overarching themes emerged encompassing personal and professional engagement. While midwives identified that they have an integral role in PMH care provision, their willingness to offer emotional care to women is compromised by a perceived lack of confidence, competence and lack of practical and emotional support systems (Jones et al., 2012a). Confidence is a complex, dynamic and context dependent phenomena (White, 2009; Bedwell et al., 2015; Holland et al., 2012) evident within clinicians who have a strong clinical practice based on knowledge, skill acquisition, clinical decision making, professional socialisation, collaboration and autonomy (White, 2009). Education and training has been shown to be effective in developing midwives confidence and competence to provide PMH care (Forrest and Poat, 2010; Gunn et al., 2006; Elliot et al., 2007; Jardri et al., 2010; McLachlan et al., 2011; Warriner et al., 2011; King et al., 2012; Lau et al., 2015b). However, delivering education and training will not necessarily translate into confidence in the provision of PMH care (Hauck et al., 2015). Thereby consideration needs to be given to what constitutes effective PMH education in preparing midwives to confidently provide optimal PMH care.

Midwives reported good levels of knowledge in relation to perinatal depression (Elliot et al., 2007; Jomeen et al., 2009). This knowledge may have been extrapolated from midwives' knowledge of PND which has been incorporated into undergraduate curricula for a number of years whilst the range of PMHPs has only recently been addressed (Jomeen et al., 2009; Jarrett and Philips, 2013; Jarrett, 2015; Higgins et al., 2016). These findings highlight the need for education and training to support midwives in appreciating psychological health within a continuum model and address the spectrum of PMHPs is required to extend midwives current knowledge beyond the traditional remit of PND (Buist et al., 2006; Jomeen et al., 2009; Jones et al., 2011; Hauck et al., 2015).

Any education and training initiative must support the development of skills required for practice as the inclusion of practical components have been found to increase midwives' confidence in advising and caring for women with PMHPs (Gunn et al., 2006; Elliot et al.,

2007; McLachlan et al., 2011; King et al., 2012). Such skills to be addressed include the appropriate use of psychosocial assessment and screening tools that can identify women who may need additional support and assist midwives' confidence in opening up communication in a sensitive manner to assess maternal mental wellbeing and instigate referrals when necessary (Buist et al., 2006; King, 2012; Austin et al., 2013; The Marce Society, 2013; Alderdice et al., 2013; McGlone et al., 2016).

While screening tools support engagement and decision making, engagement is also dependent on the midwife's approach (Rollans et al., 2013). Screening tools can act as a barrier to the development of a confiding relationship particularly if used as a tick box exercise or in the context of limited knowledge of referral pathways (Stanley et al., 2006; Rollans et al., 2013). The introduction of routine assessment measures in practice therefore requires careful consideration to prevent excessive screening, over-pathologising pregnancy, labelling woman, and over-referring to mental health services (Jones et al., 2012ab; Alderdice et al., 2013; Rollans et al., 2013). The use of screening tools were less likely during the early postnatal period where there was a reliance on clinical judgement and this may result in midwives not enquiring appropriately about the woman's psychosocial wellbeing and limiting the opportunity to identify women at risk of PMHPs (Yelland et al., 2007). When no systematic identification strategy is in use Anding et al., (2015) found that based on ratings midwives only identified half of mothers with high EPDS scores and who reported significant postnatal depressive symptoms.

Responsibility for undertaking a psychosocial assessment was predominantly seen as the remit of the midwives antenatally particularly at the booking visit which fails to take account of the onset of PMHPs throughout the perinatal period (Yelland et al., 2007; Darwin et al., 2015). Where assessment occurred, there was a lack of consistent documentation and the focus of midwives was on recording a previous mental health history rather that assessment and monitoring of current symptoms of PMHPs a finding similar to Darwin et al., 2015. Effective assessment is identified as an opportunity for early intervention rather than solely a means of determining appropriate referral pathways (Darwin et al., 2015). To undertake assessments midwives must have the confidence and skills to undertake sensitive assessment across cultures, respond appropriately to women and manage lower levels of

distress appropriately (Gunn et al., 2006; Jones et al., 2011; Reilly et al., 2013; Fontein-Kuipers et al., 2014; Darwin et al., 2015). Assessment skills need to extend to suicide risk assessment (Lau et al., 2015a).

Women value interactions with healthcare professionals who really listen (Darwin et al., 2015) and the importance of relationships should not be sacrificed to fulfil a professional obligation to undertake psychosocial assessment (Jomeen, 2012). When women report current PMH symptoms, there is a need for midwives to respond sensitively (Rollans et al., 2013). Under-confident professionals may lack the self-assurance to engage with women with PMHPs and healthcare professionals and are unable to trust their clinical reasoning leading to an over reliance on external resources (Holland et al., 2012).

The dynamic process of midwives making a professional judgement is preceded by professional and personal values/beliefs about mental health. Thereby, consideration needs to be given to the extent assessment and clinical judgement is influenced by stereotypical views (Gibb and Hundley, 2007). Within the literature negative stereotypes were evident where midwives did not record a mental health history or refer women to interdisciplinary services in a desire to protect the woman from being stigmatised and/or labelled with a PMHP (Lees et al., 2009; McCauley et al., 2011). The review identifies the need to include an affective component within education/training to address mental health attitudes which impact negatively on midwives' decisions and interactions with women (Gibb and Hundley 2007; Hauck et al., 2015; Lau et al., 2015a), and deter women from seeking further care or support (Stanley et al., 2006; Horsfall et al., 2010).

A primary characteristic of a midwives' confidence is the explicit personal belief that an affirmative outcome can be achieved i.e. appropriate referral and support of women (White, 2009). Findings from the current review indicate that midwives struggle regarding decision making when they identify women at risk, a finding supported by King et al., 2012; Rollans et al., 2013, McGlone et al., 2016 and Williams et al., 2016. Midwives also tended to over-refer women with PMHPs as they felt ill-equipped to support the woman (Ross-Davie et al., 2006; Jones et al., 2012b). This inflates referral rates and places an unnecessary burden on the health system (Reilly et al., 2013). In addition, issues regarding variability of

access to appropriate resources and referral pathways restricted a midwives' capacity to identify and refer women with psychological distress (Stanley et al., 2006). Development of care pathways by staff at all levels and specialised PMH services are required to ensure that specialised care and advice is available to midwives caring for women during the perinatal period (Rothera and Oates, 2011; the Marce Society 2013; NICE 2014; Darwin et al., 2015; Williams et al., 2016).

There is a need for a coordinated multidisciplinary approach to optimially manage PMH (CEMACH 2007; Knight, 2014). Interdisciplinary training responsive to local service needs is required (Hauck et al., 2015), and this is most effective when it is devised, delivered and attended by interdisciplinary teams including local mental health teams (Ross-Davie et al., 2006). An interdisciplinary approach to PMH education has the potential to improve awareness of mental health services, encourage development and referral to care networks, promotes inter-collaborative practice and establishment of mutual support networks (Forrest and Poat, 2005).

The context in which care is provided can influence the development of meaningful relationships (Hunter et al., 2008) and time is identified as one of the organisational barriers to the provision of PMH care (Hunter et al., 2008; Edge, 2010; Rollans et al., 2013, McGlone et al., 2016). Midwives who feel that they do not have the organisational support to undertake assessment experience guilt and anxiety in relation to the missed opportunity to identify a woman who may require support (Edge, 2010), leading to an emotionally impoverished experience for all concerned (Hunter, 2010).

Education and training must address the emotional impact that supporting women can have on midwives and include emotion work skills such as professional boundary setting, stress management and healthy coping strategies (Mollart et al., 2009; Hunter et al., 2008; Hunter and Warren, 2014). Collegial support is a recognised antecedent to confidence and promoting resilience (Hunter, 2005; White, 2009; Hunter, 2013; Hunter and Warren, 2014) however there may be fewer opportunities for this type of support in busy practice

environments. Furthermore, a level of professional support e.g. counselling may be required to support some midwives (Mollart et al., 2009; Austin et al., 2013).

Training that incorporates role modelling and clinical supervision are identified as mechanisms to enhance midwives' self-efficacy to provide emotional care to women (Mollart et al., 2009; Jardri et al., 2010; Jones et al., 2012a; Austin et al., 2013; Rollans et al., 2013). Professional development and training in PMH that begins in the undergraduate midwifery education programmes must be continued through CPD and at post-registration/graduate levels (Rothera and Oates, 2011; Rollans et al., 2013; Reilly et al., 2014; Williams et al., 2016). This is identified as fundamental to the development of a midwives' confidence and enhancement of care (McCauley et al., 2011; Jones et al., 2012ab; Hauck et al., 2015) because knowledge that is not appropriately organised and contextualised impacts on effective decision making (Jomeen et al., 2009).

Opportunities to disclose emotional distress are considered more likely to occur in the context of a continuity of care model. It is acknowledged that a continuity of care model can support healthcare professionals to provide a holistic approach to the recognition and exploration of potential changes in women's mental health status and ensure referral to specialists and community mental health services (Yelland et al., 2007; Highet et al., 2014).

Implications for practice and policy

The findings from this review highlight a number of implications for clinical practice. There is a need for CPD opportunities for clinicians designed to increase knowledge, enhance psychosocial assessment and screening skills, referral and address attitudes to women who experience PMHPs. In addition, a multi-faceted approach to PMH care incorporating education programmes and other support systems such as clinical supervision and improved access to specialist guidance are essential. Specialist mental health midwives are required to support midwives to provide effective PMH care through the provision of education, expert advice, role modelling, mentoring and resources. Furthermore, independent debriefing opportunities should be available to midwives in their workplace. In terms of policy

implications, the research highlights the need for the implementation of a continuity of care strategy as the reference standard model of care to support the emotional care to women in the perinatal period. In addition, specialised PMH services are required to improve equity of access for women and their families and to ensure that specialised care and advice is available to healthcare professionals who care for women during the perinatal period. The development and implementation of standardised guidelines are warranted to provide a consistent approach to PMH care.

Strengths and weaknesses of the review

The methodology of this review allowed the authors to explore in detail factors associated with the identification and management of PMHPs from the perspective of midwives. A robust methodological approach was employed to identify and select articles relevant for inclusion. However, there are some limitations to this review. We have only included research articles from 2006 onwards and we acknowledge that we may have excluded additional papers that would add to the current body of literature. In addition, limitations associated with computerised databases including inconsistent search terminology and indexing problems may affect the studies recovered from database searches. Given the different study designs meaningful comparisons could not be identified across studies however consistent messages emerged adding to the credibility of review findings. In some studies, methodological limitations were identified and reporting of the validity and reliability of measures was inadequate and some studies were assessed to be at the threshold for quality however it was considered valuable to include the studies to explore comprehensively the current research that has examined the midwives' role in PMH.

Conclusion

The findings of this review identify that midwives are constrained to provide care for women because of a limited knowledge and skill base and lack of referral options, and require ongoing educational and organisational supports to confidently and optimally fulfil their role in PMH. The findings from some of the studies suggest that suboptimal attitudes towards women with PMHPs exist and this may influence the quality of midwifery care provided and CPD opportunities need to challenge personal beliefs and attitudes to PMH.

The availability of access to appropriate resources and referral pathways may be important variables which influence midwives' confidence and practice and future research should continue to examine the impact of contextual factors on the provision of PMH care. Across the studies midwives reported a commitment to supporting women with PMHPs and with the availability of effective support structures midwives are committed to the provision effective PMH care.

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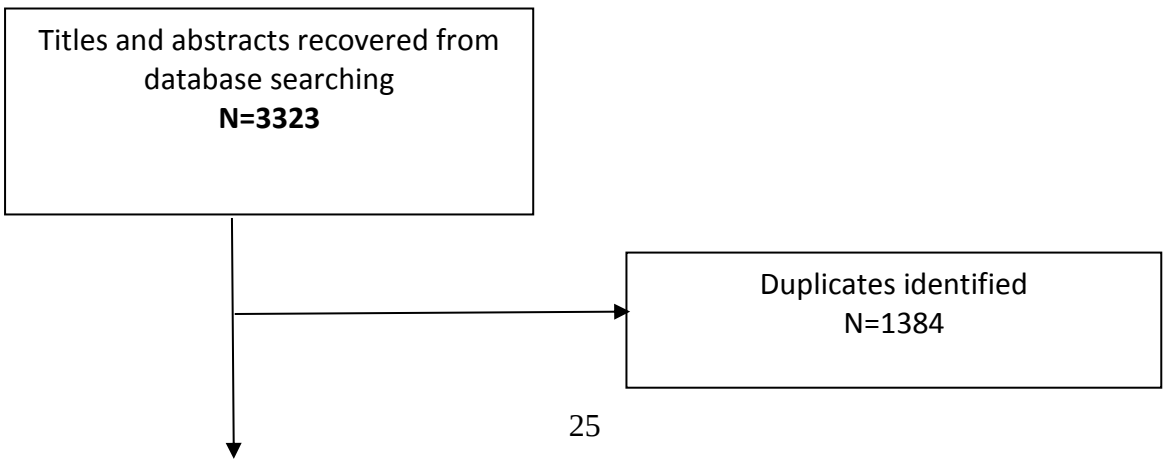
Figure 1: Flow of papers through the review



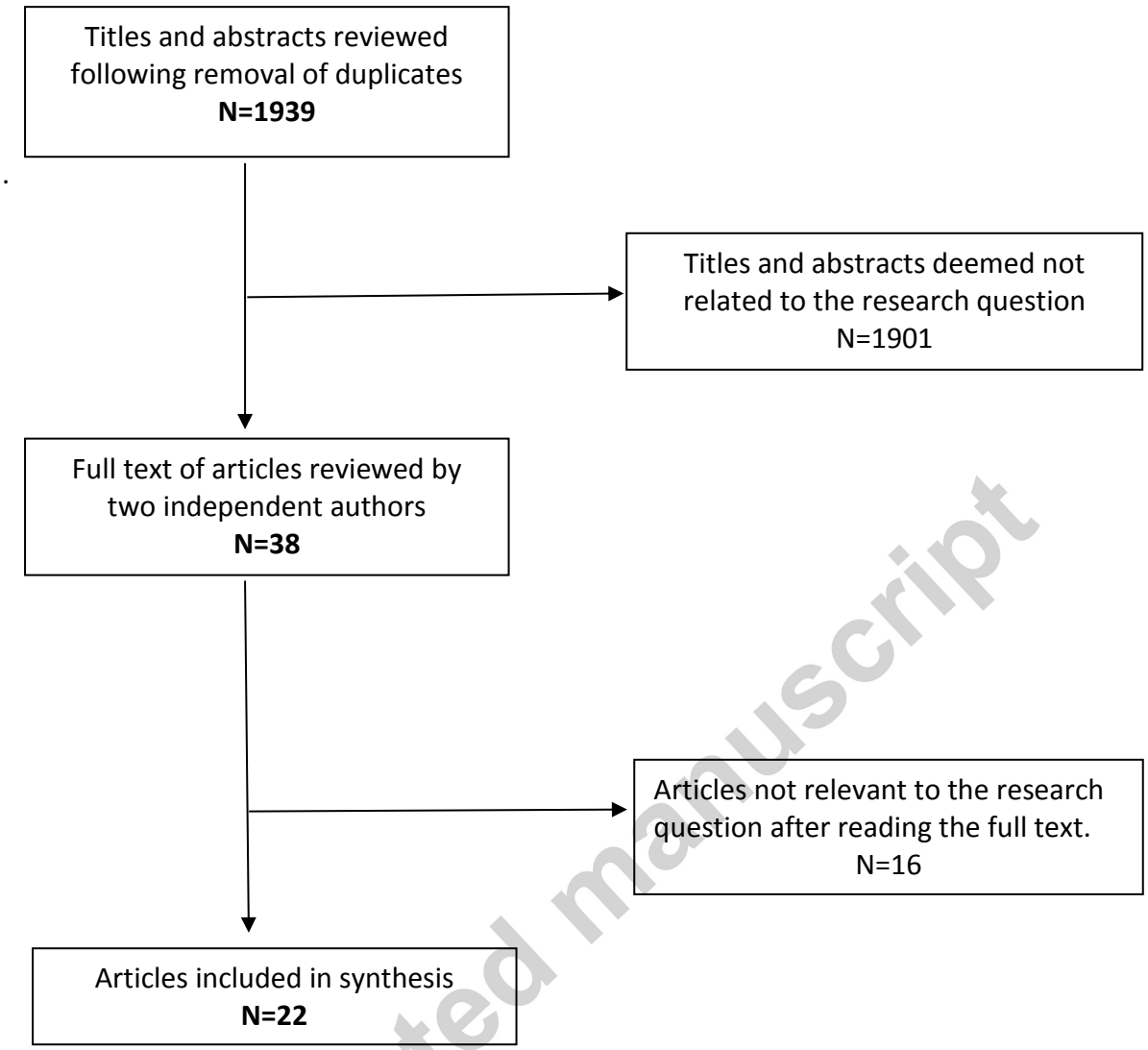


Table 1: Search parameters

Inclusion criteria	Exclusion criteria
Midwives working in community or hospital setting	Studies that reported on midwives perceptions of caring for women who use alcohol or illicit drugs
Papers from peer reviewed journals published from January 2006-February 2016	Non-peer reviewed studies

Articles written in English	Non-English
Articles from Europe, North America, Australia and New Zealand due to their comparable maternity services	Low income countries or lower middle income countries with incomparable maternity services
Primary quantitative, qualitative and mixed method studies	Review articles that did not use a systematic process to identify the literature

Table 2: Example of search strategy PsycINFO

Search ID #	Search terms	Search options	Results
S6	(TI antenatal OR antepartum OR prenatal OR pregnancy OR perinatal OR postnatal OR postpartum OR puerperal OR AB antenatal OR antepartum OR prenatal OR pregnancy OR perinatal OR postnatal OR postpartum OR puerperal OR DE "Prenatal Care" OR DE "Childbirth Training" OR DE "Pregnancy" OR DE "Adolescent Pregnancy") AND (S1 AND S2 AND S3)	**Limiters** - Publication Year: 2006-2016 **Narrow by Language:** - english **Search modes** - Boolean/Phrase	134
S5	(TI antenatal OR antepartum OR prenatal OR pregnancy OR perinatal OR postnatal OR postpartum OR puerperal OR AB antenatal OR antepartum OR prenatal OR pregnancy OR perinatal OR postnatal OR postpartum OR puerperal OR DE "Prenatal Care" OR DE "Childbirth Training" OR DE "Pregnancy" OR DE "Adolescent Pregnancy") AND (S1 AND S2 AND S3)	**Limiters** - Publication Year: 2006-2016 **Search modes** - Boolean/Phrase	140
S4	(TI antenatal OR antepartum OR prenatal OR pregnancy OR perinatal OR postnatal OR postpartum OR puerperal OR AB antenatal OR antepartum OR prenatal OR pregnancy OR perinatal OR postnatal OR postpartum OR puerperal OR DE "Prenatal Care" OR DE "Childbirth Training" OR DE "Pregnancy" OR DE "Adolescent Pregnancy") AND (S1 AND S2 AND S3)	**Search modes** - Boolean/Phrase	185
S3	TI (antenatal OR antepartum OR prenatal OR pregnancy OR perinatal OR postnatal OR postpartum OR puerperal) OR AB (antenatal OR antepartum OR prenatal OR pregnancy OR perinatal OR postnatal OR postpartum OR puerperal) OR (DE "Prenatal Care" OR DE "Childbirth Training" OR DE "Pregnancy" OR DE "Adolescent Pregnancy")	**Search modes** - Boolean/Phrase	63,253
S2	TI (“mental disorder” OR “adjustment disorder” OR “affective disorder” OR “dysthymic disorder” OR “mood disorder” OR psychiat* OR “behaviour control” OR “psychological	**Search modes** - Boolean/Phrase	564,132

	phenomena" OR depression OR "mental health" OR "stress disorder" OR "anxiety disorder" OR "maternal welfare" OR "Maternal health" OR "mental hygiene" OR bipolar OR "obsessive Compulsive disorder" OR psychosis OR "psychological distress" OR PTSD OR OCD OR "somatic disorder" OR "somatoform disorder" OR "mental illness" OR "emotional care" OR "maternal distress" OR "psychosocial wellbeing")		
S1	TI (Midwi* OR "obstetric nurse") OR AB (Midwi* OR "obstetric nurse") OR DE "Midwifery"	**Search modes** - Boolean/Phrase	2,461

Table 3: Descriptive characteristics of the included studies

Title, Author, Publication year and Country	**Study aim**	**Methodology /design**	**Sample strategy and sample size**	**Data collection method**	**Analytical approach**	**Summary of main findings**
Australian midwives knowledge, attitude and perceived learning needs around perinatal mental health. Hauck et al., (2015), Australia	To explore midwives knowledge of and attitudes towards mental health disorders in childbearing women vis-à-vis their perceived mental health learning needs	Cross sectional survey	Convenience sample (n=475) of hospital based midwives. Response rate (n=238, 50.1%)	Questionnaire (custom-designed questions and vignettes) and Stereotype Content Model	SPSS Descriptive statistics. Correlations were examined using Pearson X^2. Cluster analysis	**Main findings:** Only 37.5% of midwives felt well equipped to support women with PMHPs. Further education offered in a variety of formats responsive to local contexts covering the spectrum of perinatal mental health (PMH), associated skills, impact, service options and role of other health care professionals was desired. A range of positive attitudes to women who

						experience perinatal mental health problems (PMHPs) reported. Negative stereotyping identified.
Attitudes of midwives and maternal child health nurses towards suicide: A cross-sectional study. Lau et al., (2015a), Australia	To identify midwives' and MCHN attitudes in relation to assessing suicidality	Cross-sectional survey	Convenience sample (n=200). One health service comprising three maternity settings. Response rate (n=95)	Questionnaire (Attitudes to Suicide Prevention Scale)	SPSS version 18 Descriptive statistics. The individual item scores between midwives and MCHN were analysed using independent t-test	Midwives reported more negative attitudes towards suicide prevention than MCHN (P=0.001). Midwives reported not feeling comfortable assessing for suicide risk.
Dutch midwives' behavioural intentions of antenatal management of maternal distress and factors influencing these intentions: An exploratory survey. Fontein-Kuipers et	To explore midwives' behavioural intentions and the determinants of these intentions with regard to the management of antenatal care of women with maternal distress	An exploratory survey	Convenience sample (n=112) of community based midwives	Digital Questionnaire (custom-designed questions)	SPSS version 19. Descriptive statistics. Pearson's correlations. Multiple linear regression analysis	**Main findings:** Midwives did not report a clear intention to screen for maternal distress however they did report the intention to support women and collaborate with other health-care professionals.

al., (2014), The Netherlands						
'We just ask some questions …' the process of antenatal psychosocial assessment by midwives. Rollans et al., (2013), Australia	To report on the content and process of antenatal psychosocial assessment and depression screening undertaken by midwives at the booking visit	Ethnography	34 pregnant women 16 midwives and 2 student midwives observed during the antenatal booking visit Brief interview after the observation	16 midwives and 2 student midwives observed during the antenatal booking visit Brief interview after the observation	Content analysis	**Main findings:** Two approaches to delivery of psychosocial questions were observed: a structured approach (13/34) and a flexible approach (21/34). A more flexible style of communicating appeared to result in a reciprocal exchange between the woman and midwife. While midwives were observed to explore risk factors with women in an empathetic manner debriefing following disclosure of sensitive information only occurred in 4/34 interactions.
Australian midwives' attitudes towards care for women with emotional	To assess Australian midwives' attitudes towards caring for women with	Descriptive cohort study design	Current practicing midwives who were members of The Australian	Postal question naire (modified version of the 17-item	SPSS version 13. Descriptive statistics.	**Main Findings:** Respondents reported feeling competent in asking about emotional disorders and

distress. Jones et al., (2012a), Australia	emotional distress and their perceptions of the extent to which workplace policies and processes hindered such care		College of Midwives (n=3000 (1000 practicing midwives). Response rate (n=815, 74.3%)	REASON questionnaire (McCall et al., 2002))	Exploratory factor analysis. Inter-item correlation matrix	referring to another healthcare professional. Their willingness to offer assistance and provide emotional care was compromised by their perceived lack of competence and confidence. Workload, organisation of maternity services, current organisational priorities prevented midwives from fully realising their role in addressing women's needs in relation to depression or anxiety.
Australian midwives' awareness and management of antenatal and postpartum depression. Jones et al., (2012b), Australia	To describe midwives' self-reported practice in caring for women suffering from antenatal and postpartum depressive symptoms; and assess	Descriptive cohort study design	Current practicing midwives who were members of The Australian College of Midwives (n=3000 (1000 practicing midwives). Response	Postal questionnaire (custom-designed questions and vignette)	SPSS Version 13. Descriptive statistics. Multiple analysis of covariance	**Main findings:** Time constraints, perceived reluctance by women to seek help and lack of support services were reported as the three main barriers to quality of care for women with depression. Midwives

	midwives' ability to detect depression and their knowledge of therapeutic interventions for depressive symptoms in childbearing children		rate (n=815, 74.3%)			indicated their acceptability of screening and the main tool used to screen women for depression was the EPDS. Midwives in this study reported confidence in liaising with the multidisciplinary team and specialised health service. Knowledge of perinatal depression was evident from responses to vignette.
Identifying and supporting women with psychosocial issues during the postnatal period: Evaluating an educational intervention for midwives using a before-and-after survey. McLachlan et al., (2011), Australia	To evaluate an advanced communication skills education programme (PinC ANEW education programme) for midwives caring for women during the postnatal period	Before and after survey design	Convenience sample of 25 midwives. 24 completed the before survey and 22 completed the after survey. 21 pairs of data available for analysis	Questionnaire (Custom designed questionnaire consisting of 4 or 5 point Likert scales)	STRATA version 8.0. Frequency proportions. Paired ordinal variants summarised using the Wilcoxon Sign Rank Test	After completing the programme midwives self-reported statistically significant positive changes in communication skills, comfort, confidence and competence in relation to knowledge, identification and care of women with psychosocial issues during the postnatal period.
Midwives	To explore	A explorative	Convenie	Postal	SPSS	**Main findings:**

and assessment of perinatal mental health McCauley et al (2011), Australia	midwives' attitudes, skills, knowledge and experience of working with women who have a mental illness during the perinatal period, identify the implications of their experience and make recommendations for practice	descriptive survey	nce sample of 20 hospitals, 19 agreed to participate. 536 questionnaires distributed. Response rate (n=161, 30%)	questionnaire (The Victorian Survey of Midwives 2000 questionnaire with one open question)	Summary statistics. Qualitative thematic process	Midwives reported neither feeling comfortable or confident to work with women with serious mental illness. They reported limited knowledge of the availability or accessibility of appropriate interdisciplinary clinicians particularly community based resources. Lack of referral of women in some cases was to protect the woman from being stigmatised or labelled with a mental illness. Negative responses to women with mental illness identified. Further training required in relation to knowledge, skills, care provision and interventions.
Australian Midwives' Knowledge of Antenatal	To differentiate midwives knowledge	Descriptive cohort study design	Current practicing midwives who were	Postal questionnaire (custom-	SPSS Version 13. Analysis	**Main findings**: Midwives have reasonable knowledge of

and Postpartum Depression: A National Survey Jones et al., (2011), Australia	of antenatal depression and postpartum depression as well as assess their awareness of the co-morbidity of depression and other associated emotional disturbances		members of The Australian College of Midwives (n=3000 (1000 practicing midwives). Response rate (n=815, 81.5%)	designed questions)	of variance and multiple regression analysis	perinatal depression and further training to improve skills to screen, assess and care for women with perinatal depression desired. Higher average percentages were obtained for questions about Post Partum Depression (PPD) than antenatal depression.
Managing perinatal mental health: A survey of practitioners' views. Rothera and Oates (2011), UK	To examine the views of health professionals relating to the identification, treatment and management of mental health disorders in childbearing women and to identify where problems exist	A explorative descriptive survey	Midwives, health visitors and obstetricians working in acute and primary trusts in the East midlands. 768 (Total 2872) response rate =26.7%. 468 midwives responded	Postal questionnaire (custom-designed closed questions and vignettes)	SPSS version 13. Descriptive statistics. Significance values for cross-tabulations were calculated using Pearson's Chi-square test (X^2)	**Main findings:** Only responses from midwives included in the integrative review. Respondents indicated a requirement for further specialist training (knowledge, skills, and care provision), the availability of guidelines and access to specialist advice to support them to undertake a role in PMH.
Falling though the	To investigate	Qualitative descriptive	Range of healthcar	In-depth interview	The principle	**Main findings:** Midwives

net- Black and minority ethnic women and perinatal mental healthcare: health professionals' views. Edge (2010), UK	health professionals' views about perinatal mental healthcare for Black and minority ethnic women		e professionals (n=42) 2 specialist's midwives (in-depth interviews) 9 hospital midwives (focus group) 11 community midwives (focus group) 5 midwifery managers (focus groups) 5 GPs (individual interview), 5 health visitors (focus group) 2 hospital doctors	s Focus group interviews	s of framework analysis were applied to data analysis	reported a lack of confidence and competence in identifying and managing perinatal depression irrespective of ethnic origin and this impacted on referral. Time constraints, staff shortages, lack of training, lack of cultural competence, language barriers and timely access to appropriate care pathways were identified as barriers to provision of effective PMH care.
Midwives' experience of encountering women with posttraumatic stress symptoms after	To describe midwives' experience of encountering women with posttraumatic stress symptoms	Qualitative research method	Purposive sample of eight midwives working in specialised clinics for women	Semi-structured digital recorded interviews	Thematic content analysis	**Main findings:** Themes 2 and 3 relevant to review. Midwives identified the importance of being present, listening and enabling the

childbirth. Nyberg et al., (2010), Sweden	after childbirth		with posttraumatic stress symptoms			women to express their feelings and tell their stories and support women to give birth after a traumatic experience while maintaining professional boundaries. Midwives identified the opportunity to reflect on their encounter with women, support from colleagues, obstetricians and mentoring as important for dealing with emotions from their encounters with the women.
Midwives' illness perceptions of antenatal depression. Jomeen et al., (2009), UK	To investigate midwives' experiences and knowledge of Antenatal Depression (AND)	Cross-sectional survey	Convenience sample of midwives recruited from two hospitals (n=241 midwives). Response (n=52, 21.6%)	Adapted version of the Illness Perception Questionnaire (IPQ-R)	SPSS version 11. Descriptive statistics	**Main findings:** Limited training for midwives on AND in pre-registration and post-registration education and training rated as poor or adequate. Appropriate illness perceptions of AND however midwives perceived a large overlap of

						AND symptoms with symptoms commonly reported by non-depressed women. Knowledge of AND may have been extrapolated from knowledge of PND.
Professionals' knowledge of perinatal mental healthcare. Lees et al., (2009), UK	To elicit information about the patterns and systems of referral of mothers requiring perinatal mental health input across Coventry and Warwickshire	Questionnaire and focus group interviews	Convenience sample community midwives (n=74) (n=34 46% response) 50 midwives in focus group discussions	No details of the questionnaire provided. No details of interview guide used in focus groups	Not identified	Main findings: screening questions advocated by NICE (2007) guidelines not consistently used. Booking appointment too short to explore PMH issues. Inadequate knowledge and preparation to undertake role in PMH. Further training required.
Midwives' emotional wellbeing: Impact of conducting a Structured Antenatal Psychosocial Assessment (SAPSA). Mollart et al., (2009) Australia	To investigate the impact of conducting structured antenatal psychosocial assessments (SAPSA) on midwives emotional wellbeing	Qualitative descriptive	Purposive sampling 18 midwives at two hospitals in NSW	Three focus groups with 5-8 participants	Thematic analysis	**Main findings:** Repeated exposure to sensitive issues led to increased levels of stress, frustration and unhealthy coping strategies. Talking to colleagues was identified as a way of coping

						with distress the midwife experienced as was clinical supervision. Participants identified the need for support systems and organisational structures in addition to specific education and training.
Slovenian midwives' and nurses' views on post-natal depression: an exploratory study Mivšek et al., (2008) Slovenia	To explore Slovenia midwives' and nurses' knowledge of, and attitudes towards, post-natal mood disorders	Qualitative research	Purposive sample of five Slovenian midwives and five nurses	Semi-structured interviews with two focus groups. Five midwives in group one Five nurses in group two	Not clear	Only data from midwives included in review. **Main findings:** Some midwives perceived they had enough knowledge of postnatal depression however lack of knowledge noted in statements made in focus groups. Treatment of postnatal depression considered the doctor's responsibility and midwives did not identify that they had a role in the prevention and management of

						PND. Barriers to the provision of PMH care included lack of continuity of carer.
Detection and initial assessment of mental disorder: the midwife's role. Elliott et al., (2007), UK	Two studies reported. 1. To assess the change in knowledge, confidence and attitude to practice reported by midwives in a questionnaire prior to a study day on PMH and one month later. 2. To compare the information recorded in the handheld maternity notes before and after introduction of the booking questions in the study days	Pre-post questionnaire evaluation of midwives' knowledge, confidence and attitudes to practice before and after a study day on PMH and screening at booking	Convenience sample of midwives who attended a study day on PMH. 187 completed pre questionnaire and 73 completed post training questionnaire	Questionnaire (custom-designed closed questions and vignettes)	Not identified. SPSS	**Main findings:** Most respondents to the post-training questionnaire reported their knowledge, confidence and positive attitudes to perinatal mental health problems and severe perinatal mental health problems to have increased as a result of the one-day training. Findings Study two: maternity notes. Significant difference in information recorded by midwives post training
What psychosocial well-being in the	To explore midwives' views of psychosocial	Naturalistic inquiry	Convenience sample of communit	Semi-structured interview	Thematic analysis	**Main findings:** Midwives views of psychosocial wellbeing

postnatal period means to midwives. Gibb and Hundley (2007) Scotland	well-being in the postnatal period		y midwives and one focus group consisting of student midwives. Focus group FG1(n=7) community midwives FG2 (n=6) community midwives FG3 (n=8 student midwives	s		influenced assessment. Psychosocial well-being was conceptualised in terms of how the woman was coping and her expectations of birth and motherhood. A range of skills used to assess psychosocial wellbeing which included observation of family interactions, worrying behaviours and communication skills and labour debriefing to identify unmet expectations. Assessment may have been influenced by stereotypical generalisations. Meeting the woman antenatally supported midwives to make a judgement on how the woman was coping.
Health professional's knowledge and awareness	To examine knowledge and awareness of perinatal	A cross sectional survey	A random sample of General Practition	Postal question naire (custom-designed	SPSS. Compari sons – Analysis of	**Main findings:** High level of knowledge and awareness of depression

of perinatal depression: Results of a national survey. Buist et al., (2006), Australia	depression in health professionals involved in perinatal care throughout Australia prior to the implementation of a comprehensive screening program, aimed at detection and access to appropriate management		ers (GPs), Maternal Child Health Nurses (MCHN) and Midwives from 43 separate maternity services. Response rate GPs (n=246 or 23%), MCHNs (n=338 or 55%) and midwives (n=569 or 57%)	questions and vignette)	Variance (ANOVA) and t-tests	identified. Depression more likely to be considered postnatally than antenatally. Further education required to increase awareness of antenatal depression.
A public health role in perinatal mental health: Are midwives ready?. Ross-Davie et al., (2006), UK	The aim of the pre-training questionnaire was to establish the level of education, confidence, interest, knowledge and experience of maternity staff in perinatal mental health prior to attending the training day	An exploratory survey (pre educational intervention)	Convenience sample (n=187 midwives) assigned to attend the mandatory perinatal mental health training day	Questionnaire (custom-designed questions)	SPSS. Descriptive statistics. McNemar – analysis of change	**Main findings:** The majority of midwives perceived their pre-registration PMH training to be inadequate. Respondents reported feeling confident asking about mental health however approximately half expressed a level of concern about what to do if women disclosed a history of current or past mental health problems. Midwives

						reported a significant positive change ($p<0.001$) about referring to the newly established specialist PMH team. Midwives agreed that psychological care is a central part of the midwife's role and that midwives are well placed to provide good psychological care to women however there was a high degree of variance in knowledge levels and the majority of midwives did not feel confident about caring for women with severe mental health problems.
Attitudes, Perceived Ability and knowledge About Depression Screening: A Survey of Certified Nurse-	To explore the hypothesis that CNMs/CMs with a positive attitude, a perceived level of	An exploratory survey	Convenience sample of CNMs/CMs attending the American College of Nursing	Questionnaire (custom-designed questions)	SPSS version 12. Descriptive and inferential statistics	**Main findings**: The majority of CNMs/CMs agreed that they had a role in PMH and that a tool/structured interview/questionnaire should be used to

Midwives/Certified Midwives. Sanders, (2006), New York	competence and knowledge about depression screening were more likely to integrate depression screening into their practice		and Midwifery annual meeting. (n=378) Response rate 42.6%			screen women however only 25.1% reported that they always screen for depression. Attitude, perceived ability and knowledge were positively related to depression screening.
Are Slovenian midwives and nurses ready to take on a greater role in caring for women with postnatal depression?. Skočir and Hundley, (2006), Slovenia	To answer the question of whether Slovenian midwives and nurses feel prepared to take over the responsibility of care of women with postnatal depression	An exploratory survey	Convenience sample of midwives, nurses and community nurses who worked with pregnant, labouring or postnatal women Response 134/175 midwives consisting of 86 from the maternity hospital and 48 from the community services	Questionnaire (custom-designed questions)	SPSS. Descriptive statistics	**Main findings**: Lack of knowledge and confidence about PND and the need for further education identified. The main preferred methods of training on PND were seminars and practical workshops. Role of professionals: more than three quarters of midwives and nurses agreed that they had a role in educating women about PND. Role involved listening and advising the woman, notifying her doctor/obstetric

		ian and talking with the woman.

Table 4(a): CASP methodological quality appraisal of qualitative studies

Authors	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Item 10
Rollans et al., (2013)	Yes	Yes	Yes	Yes	Unclear[a]	Unclear	Yes	Yes	Unclear[d]	Clear
Edge, (2010)	Yes	Yes	Yes	Yes	Unclear[a]	Unclear	Unclear[b]	Yes	Yes	Clear
Nyberg et al., (2010)	Yes	Yes	Yes	Yes	Unclear[a]	Unclear	Yes	Yes	Unclear[d]	Clear
Lees et al., (2009)	Yes	Yes	Unclear	Yes	Unclear[a]	Unclear	Unclear[c]	Unclear	Unclear[d]	Clear
Mollart et al., (2009)	Yes	Yes	Yes	Yes	Unclear[a]	Yes	Yes	Yes	Yes	Clear
Mivšek et al., (2008)	Yes	Yes	Yes	Yes	Unclear[a]	Unclear	Unclear[c]	Yes	Yes	Clear
Gibb and Hundley, (2007)	Yes	Yes	Yes	Yes	Unclear[a]	Unclear	Unclear[c]	Yes	Unclear[d]	Clear

CASP Key:
1. Was there a clear statement of the aims of the research?
2. Is a qualitative methodology appropriate?
3. Was the research design appropriate to address the aims of the research?
4. Was the recruitment strategy appropriate to the aims of the research?
5. Was the data collected in a way that addressed the research issue?
6. Has the relationship between the researcher and participants been adequately considered?
7. Have ethical issues been taken into consideration?
8. Was the data analysis sufficiently rigorous?
9. Is there a clear statement of findings?
10. How valuable is the research?

[a] Theoretical saturation not discussed.
[b] Did not explicitly discuss informed consent
[c] No ethical approval obtained
[d] Credibility of findings not explicitly discussed

Table 4(b): Survey methodological quality appraisal checklist (adapted from the CASP cohort studies checklist)

Authors	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9
Hauck et al., (2015)	Yes	Yes[a]	Yes	Clear	Yes	Yes	Yes	Clear	Clear

Lau et al., (2015a)	Yes	Yes [a]	Yes	Clear	Yes	Yes	Yes	Clear	Clear
Fontein-Kuipers et al., (2014)	Yes	Yes [a]	Yes	Clear	Yes	Yes	Yes	Clear	Clear
Jones et al., (2011, 2012a and 2012b)	Yes	Yes	Yes	Clear	Yes	Yes	Yes	Clear	Clear
McCauley et al., (2011)	Yes	Yes[a]	Unclear[b]	Clear	Yes	Yes	Yes	Clear	Clear
McLachlan et al., (2011)	Yes	Yes[a]	Unclear[b]	Clear	Yes	Yes	Yes	Clear	Clear
Rothera and Oates, (2011)	Yes	Yes[a]	Unclear[b]	Clear	Yes	Yes	Yes	Clear	Clear
Jomeen et al., (2009)	Yes	Yes[a]	Unclear[b]	Clear	Yes	Yes	Yes	Clear	Clear
Elliot et al., (2007)	Yes	Yes[a]	Unclear[b]	Clear	Unclear	Yes	Yes	Clear	Clear
Lees et al., (2009)	Yes	Yes[a]	Unclear[b]	Unclear	Unclear	Unclear	Yes	Clear	Clear
Buist et al., (2006)	Yes	Yes	Unclear[b]	Clear	Yes	Yes	Yes	Clear	Clear
Ross-Davie et al., (2006)	Yes	Yes[a]	Unclear[b]	Clear	Unclear	Yes	Yes	Clear	Clear
Saunders, (2006)	Yes	Yes[a]	Yes	Clear	Yes	Yes	Yes	Clear	Clear
Skočir and Hundley, (2006)	Yes	Yes[a]	Yes	Clear	Yes	Yes	Yes	Clear	Clear

Checklist:

1. Did the study address a clearly focused issue?
2. Were the subjects recruited in an acceptable way?
3. Was the outcome accurately measured to minimise bias??
4. What are the results of this study?
5. How precise are the results?
6. Do you believe the results?
7. Can the results be applied to the local population?
8. Do the results of the study fit with other available evidence?
9. What are the implications of this study for practice?

a. Convenience sample
b. Reliability and validity of the questionnaire not reported

Table 5: Themes and subthemes identified from the studies included in the review

	Personal engagement				Professional engagement			
Author/s	**Knowledge**	**Skill**	**Decision making**	**Attitude**	**Continuous Professional**	**Organisation of care**	**Referral**	**Support**
Hauck et al., 2015	√	√	√	√	√		√	
Lau et al., 2015a			√	√	√			
Fotein Kuipers et al., 2014	√	√	√		√		√	
Rolans et al., 2013		√	√		√	√		
Jones et al., 2012a	√	√	√	√	√	√	√	
Jones et al., 2012b	√		√	√	√	√		
Jones et al., 2011	√	√	√		√			
McCauley et al., 2011	√	√		√	√	√	√	
McLachlan et al., 2011	√	√	√		√		√	
Rothera and Oates, 2011	√	√		√	√		√	
Edge, 2010	√	√	√		√	√	√	√
Nyberg et al., 2010		√			√			√
Jomeen et al., 2009	√			√	√		√	
Lees et al., 2009	√	√		√	√	√	√	
Mollart et al., 2009					√			√
Mivšek et al., 2008	√			√		√		
Elliott et al., 2007	√			√	√	√		
Gibb and Hundley, 2007		√	√	√		√		
Buist et al., 2006	√				√			
Ross-Davie et al., 2006	√			√	√	√	√	
Sanders, 2006	√		√	√				
Skočir and Hundley, 2006	√			√	√	√	√	
Representation (n, %)	17/22	12/22	11/22	14/22	19/22	11/22	11/22	3/22
	77%	54.5%	50%	64%	86%	50%	50%	14%

Table 6: Continuous Professional Development requirements

Format: Midwives identified a variety of formats for CPD including in-service programmes, online, seminars, workshops and study days (Elliot et al., 2007, McCauley et al., 2011; Hauck et al., 2015).
Topics: PMHPs across cultures, SMHPs, prevalence, consequences, risk factors, screening, mental health assessment, suicide risk assessment, communication skills, problem solving, specific care provision, mental health interventions, clinical management, counselling, medications, referral systems, community resources, handling stress and aggression, boundary setting and stress management (Buist et al., 2006; Ross-Davie et al., 2006; Jomeen et al., 2009; Lees et al., 2009; Edge, 2010; Nyberg et al., 2010; Jones et al., 2011; McCauley et al., 2011; Rollans et al., 2013; Fontein-Kuipers et al., 2014; Hauck et al., 2015; Lau et al., 2015a)

Highlights

- A multi-faceted approach incorporating education programmes and other support systems such as clinical supervision, improved access to specialist guidance and opportunities for debriefing is required to support midwives to undertake a role in perinatal mental health care.
- Suboptimal attitudes towards women who experience perinatal mental health problems exist and this may influence the quality of midwifery care provided and continuous professional development opportunities need to challenge personal beliefs and attitudes to perinatal mental health problems.
- Specialised perinatal mental health services are required to improve equity of access for women and their families and to ensure that specialised care and advice is available to health care professionals who care for women during the perinatal period.