There is more to perinatal mental health care than depression: Public health nurses reported engagement and…

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There is more to perinatal mental health care than depression: public health nurses' reported engagement and competence in perinatal mental health care

Abstract

Aim: To explore public health nurses' engagement, competence and education needs in relation to perinatal mental health care in Ireland.

Background: It is estimated that 15-25% of women will experience a mental health problem during or post pregnancy, either as a new problem or a reoccurrence of a pre-existing problem. Public Health Nurses, or their equivalent, are ideally positioned to support women's mental health and improve health outcomes for the woman and baby, yet little is known about their role and engagement with mental health issues, other than with postnatal depression. The objectives of the study were to identify public health nurses' knowledge, skills and current practices in perinatal mental health and establish their education needs.

Design: The research used a descriptive design.

Method: 186 public health nurses completed an anonymous, online-survey, designed by the research team.

Results: While public health nurses are positive about their role in supporting women's mental health, they lack the knowledge and skills to address all aspects of mental health, including opening a discussion with women on more sensitive or complex issues, such as

trauma and psychosis and providing information to women. Those who received education reported statistically significant higher knowledge and confidence scores than those without.
Conclusion: Public health nurses lack the knowledge and skills required to provide comprehensive perinatal mental health care to women. Future education programmes needs to move beyond postnatal depression and address the range of mental health problems that may impact on women in the perinatal period.
Relevance to clinical practice: Without knowledge and skill among nurses in all aspects of perinatal mental health women with significant mental health needs may be left to cope alone and lack the necessary prompt evidence-based interventions and supports.

Key words: perinatal mental health, public health nurses, knowledge and skills, education

Summary statement

What does this paper contribute to the wider global clinical community?

Internationally, the research available on nurses working in the community and tasked with providing perinatal mental health care is focused on postnatal depression. This paper takes a more comprehensive approach to defining perinatal mental health and includes issues that frequently go unrecognised such as bipolar disorder, psychosis, anxiety, obsessive thinking or behaviour, self-harm and eating disorders.

The findings are highly relevant as they identify the need for nurses to adopt a more comprehensive approach towards screening and assessment of risk factors and to develop the knowledge and skills to address all aspects of perinatal mental health, including the more sensitive or complex issues, such as trauma and psychosis.

INTRODUCTION

For most women, pregnancy and motherhood is a positive psychological process; however, for some women this life-changing event can result in a mental health problem. It is estimated that 15-25% of women will experience a mental health problem either during pregnancy or in the first year post pregnancy (NICE, 2014), either as a new problem or as a reoccurrence of a pre-existing mental health problem. Despite the prevalence of perinatal mental health problems (PMHPs), they frequently go unrecognised by health care practitioners. Providing psychological support to mothers, children and families in the perinatal period is considered an important global health issue (Beyondblue, 2008; WHO, 2013), as early detection of distress, prompt intervention, and support can improve maternal and infant outcomes. The role of the nurse who works in the community and is tasked with providing a proactive service to support and care for women, babies and families during the perinatal period is increasing in importance given that hospital stay post birth is declining in all western countries. Similar to international figures, in the Republic of Ireland (ROI), the average length of stay for singleton birth is 2.5 days, with over 90% of singleton mothers who undergo caesarean birth being discharged from hospital three to five days after childbirth (HSE, 2016: 55-56). For women who experience perinatal mental health issues, this nurse role takes on greater significance, as they are the nurses that most often meet with women and their families in the postpartum period and are identified as a key support person for women within the international literature (Chew-graham *et al.* 2008; Glavin *et al.* 2010a; Rollans *et al.* 2013; Tammentie *et al.* 2013; Agapidaki *et al*. 2014; Noonan *et al.* 2017).

Known as Health Visitors or Specialist Community Public Health Nurses in the UK (Rollans *et al.* 2013), Child and Family Health Nurses (CFHNs) in Australia, Plunket Nurses in New Zealand, they are termed Public Health Nurses (PHNs) in Canada, Sweden, Holland and Ireland. Within Ireland, the PHN service comprises the largest group of nurses employed in

the Irish community setting. PHNs provide a range of interventions that span the lifespan, including maternal and child health services within geographically defined caseloads. Despite this, studies into the role of the PHN in Ireland in the context of perinatal mental health (PMH) are sparse, with studies in other countries primarily focusing on postnatal depression (Almond and Lathlean, 2011; Rush, 2012; Rollans *et al*. 2013; Borglin *et al.* 2015).

This paper takes a more comprehensive approach towards defining perinatal mental health problems and reports the findings of a study that explored PHNs' reported engagement, competence and needs in relation to issues.

Perinatal Mental Health Problems

It is estimated that between 7-15% of women will experience antenatal and postnatal depression (NICE, 2014), with women with a prior history of depression or antenatal depression being at an increased risk of depression in the postnatal period (Glasser *et al.* 2016). Similar to antenatal depression, perinatal anxiety is frequently underdiagnosed or misdiagnosed, yet it is a significant mental health issue (Vesga-Lopez *et al.* 2008). The rate of anxiety disorders is estimated to be between 14-15% (SIGN, 2012; NICE, 2014), while approximately two-thirds of women who experience perinatal depression have co-morbid anxiety (Wisner *et al.* 2013). Pregnancy and early mothering can also increase vulnerability to obsessive thinking and, while intrusive thoughts are common in the perinatal period, they may cause significant distress to women. The content of obsessive, intrusive thoughts is often influenced by the woman's context (Barber, 2009), and therefore may be focused on the foetus, the birth, the woman herself or her partner. Obsessive and intrusive thoughts or images of harming the baby are not uncommon. In addition, the perinatal period may be a time of increased risk of developing obsessive compulsive disorder (OCD), with the prevalence rates for postnatal OCD ranging between 4-9% (Challacombe and Wroe 2013).

Postpartum psychosis, which is considered the most severe mental health problem in the puerperium, is estimated to affect one or two women per 1,000 births across all cultures (NICE, 2007). However, women with a prior history of bipolar disorder, especially those who stop medication abruptly, have a reported reoccurrence rate approaching 50% in the antenatal period and 70% in the postnatal period (Viguera *et al.* 2007; Wesseloo *et al.* 2016). Similarly, women with a diagnosis of schizophrenia, other types of psychosis or those that have experienced a previous postpartum psychosis are also at increased risk (Munk-Olsen *et al.* 2009).

Research also suggests that there are higher rates of Post-Traumatic Stress Disorder (PTSD) in perinatal women, particularly in those that have already been affected by childhood abuse or traumatic experiences, including childbirth (Hinton *et al.* 2015). Studies have also highlighted the potential for reoccurrence and/or the worsening of a pre-existing binge eating disorder (Watson *et al.* 2013). Evidence also suggests that substance misuse during pregnancy has increased over the last three decades (Desai *et al.* 2014; Passey *et al.* 2014). The potential for intimate partner violence (IPV) to begin or escalate is understood to significantly increase during pregnancy (Jeanjot *et al.* 2008; Taillieu and Brownridge, 2010). Hence, the importance of nurses taking a comprehensive approach towards mental health throughout pregnancy, birth and early motherhood.

Public Health Nursing's role in perinatal mental health care

While little is known about how public health nurses working in Ireland enact their role in relation to women's perinatal mental health, studies elsewhere indicate that PHNs perceive that they have a role in the early identification, education, support and referral of women experiencing mental health problems (Rollans *et al.* 2013; Borglin *et al.* 2015). In some

studies PHNs identified their role as giving positive feedback, affirmation and support to new mothers (Rush, 2012; Tammentie *et al.* 2013; Rollans *et al.* 2013; Borglin *et al.* 2015), as well as acting as a positive role model in how to interact with the baby (Tammentie *et al.* 2013). Studies that explored the PHN's role in screening and assessing mental health, with particular emphasis on depression, indicate that while PHNs are involved in screening and use tools to aid clinical decision making, there is a lack of consistency in approach, even when clear guidelines and protocols are available (Chew-Graham *et al.* 2008; Jomeen *et al.* 2013; Rollans *et al.* 2013; Borglin *et al.* 2015). In terms of supports provided to women, PHNs report that they provide additional open listening visits (Brown and Bacigalupo, 2006; Almond and Lathlean, 2011; Cummings and Whittaker, 2016), supportive counselling (Glavin *et al.* 2010b), arrange home help (Tammentie *et al.* 2013; Borglin *et al*. 2015), and refer women to a variety of health care professionals (general practitioners, counsellors, psychiatrists, psychologists and social workers) and services (mother and baby unit, community mental health teams and postnatal depression groups) (Almond and Lathlean, 2011; Rush, 2012; Rollans *et al*. 2013; Borglin *et al.* 2015). While the findings provide important insights into the role and function of the PHN, a significant issue with the studies is their emphasis on postnatal depression, with the majority exploring PHNs' practice or evaluating specific interventions focused on postnatal depression to the exclusion of other mental health problems.

THE STUDY

Aim and objectives

The aim of the study was to explore public health nurses' engagement and competence in the broader aspects of perinatal mental health care. The objectives of the study were to identify PHNs' knowledge of perinatal mental health issues, their perceived skill in providing

perinatal mental health care to women, their current practices in perinatal mental health care, and, to establish their education needs going forward.

Design

The research design for the study was descriptive. Data for the study were collected using an anonymous, self-completed online-survey. This method was selected as it is a relatively easy and cost-effective means of obtaining structured information from participants, while its anonymity minimises the potential for socially desirable responses (Parahoo, 2006; de Vaus, 2014).

Data collection

Data for the study were collected over a 2 month period in 2016.

Survey

Data were collected using an online survey hosted on SurveyMonkey. The survey was developed by the research team based on available research in the area and consultation with practitioners and clinical experts in perinatal mental health. It used a combination of binary (yes/no), categorical, Likert scale, and open-ended questions. The topics addressed therein included: Demographic data; Contact with and caseload of women with Perinatal Mental Health Problems (PMHPs); Knowledge of perinatal mental health (19 items); Skill in perinatal mental health care (35 items); Overall skill and confidence in perinatal mental health care (2 items); Perinatal mental health practices (23 items); Previous perinatal mental health education; Perinatal mental health services and guidelines (6 items); and Educational and practice priorities (2 open-ended questions).

Knowledge of perinatal mental health was rated on a scale from 1 (not at all knowledgeable) to 5 (very knowledgeable). Skill in undertaking perinatal mental health practices was also rated on a five-point scale (1 'not at all skilled' to 5 'very skilled') while overall confidence and skill in relation to perinatal mental health care practice was rated on scales from 1 to 10.

Sample and recruitment

All PHNs registered with the Nursing and Midwifery Board of Ireland (NMBI) and employed either full-time or part-time in public health nursing services were targeted for inclusion in the study. Both agency nurses and student nurses were excluded. As there was no national database of PHNs, the sample for the survey was obtained through the Directors of Public Health Nursing within Ireland, who granted access and acted as recruitment gatekeepers by sending an email to relevant individuals within the services for distribution to the PHNs. The email contained study information, an invitation to participate and a link to the online survey. Two follow-up emails were sent by gatekeepers two weeks apart to remind potential participants to complete the surveys.

Ethical considerations

The voluntary nature and anonymity of participation in the survey was outlined in all study information, with return of the survey taken as evidence of implied consent. Ethical approval for the study was granted by the University's Research Ethics Committee and the ethics committee that approves studies involving PHNs in Ireland.

Data analysis

The survey data were analysed using the Statistical Package for the Social Sciences (SPSS), version 21 (IBM Corp 2012). Descriptive statistics, including frequency distributions, means

and standard deviations were generated to describe the data. Independent sample t-tests were performed to examine whether they were any statistically significant differences in participants' mean skill, confidence, and knowledge scores based on prior perinatal mental health education. The educational and practice priorities identified by participants were analysed using content analysis by two researchers (CD, AH).

Validity and reliability/Rigour

The face validity of the survey was established by asking experts and specialists in the field of perinatal mental health care to review the survey and provide feedback in relation to its relevance and appropriateness as well as to identify any gaps in the survey. Practitioners from midwifery, mental health nursing and psychiatry with expertise in perinatal mental health care reviewed the survey. In addition, feedback on the survey was provided by midwives, public health nurses and practice nurses.

RESULTS

Sample

186 public health nurses completed the surveys. It was not possible to calculate a response rate given that, in the absence of a national database, it is not known how many potential participants received the survey link. However, based on national figures of the number of PHNs in Ireland (n=1,396) (Office of the Nursing and Midwifery Services Director, 2012), it is estimated that 13.6% of PHNs nationally responded. The majority of PHNs were Registered General Nurses, educated to postgraduate diploma/masters level, over 45 years of age and working in their current role for over 11 years (Table 1).

Knowledge of perinatal mental health

PHNs reported relatively good knowledge on some PMH topics, such as, depression (M=3.56, SD=0.83), anxiety (M=3.19, SD=0.97), the impact of PMH problems on mother and baby (M=3.33, SD=0.98), risk factors (M=3.15, SD=0.94), support services available (M=3.10, SD=1.01) and screening tools (M=3.01, SD=1.17), with scores all above the midpoint of the scale. However, lower knowledge was rated in relation to knowledge of personality disorders (M=1.83, SD=0.83), obsessive compulsive or ritualistic behaviour (M=1.88, SD=.90), eating disorders and pregnancy (M=1.98, SD=0.97), self-injury/suicide in the perinatal period (M=2.01, SD=0.98), bipolar affective disorder (M=2.02, SD=0.95), drug use in pregnancy and breastfeeding (M=2.07, SD=0.96), and legal aspects (M=2.08, SD=0.97), all of which rated below the midpoint of the scale (Table 2).

Overall skill and confidence

PHNs were asked to rate their overall skill on a scale from 1 (not at all skilled) to 10 (very skilled). Overall skill in relation to perinatal mental health care was rated at a mean of 5.24 (SD=1.93), just below the midpoint of the scale. On a similar scale from 1 (not at all confident) to 10 (very confident), the PHNs also rated their overall confidence below the midpoint of the scale (M=5.24, SD=1.96).

Skills in perinatal mental health activities

Skill in undertaking a variety of perinatal mental health practices was rated on a five-point scale (1 ‘not at all skilled’ to 5 ‘very skilled’). PHNs reported being most skilled in liaising with other practitioners and services (Colleagues: M=4.20, SD=.92; Managers: M=4.11, SD=.97; Adult mental health services: M=3.62, SD=1.15, Perinatal mental health services M=3.55, SD=1.22) and discussing with women referral to various services and practitioners (GP/PHN: M=4.21, SD=.88; Child Protection Services: M=3.82, SD=.99; Social worker

M=3.64, SD=1.01; Drug and alcohol Services: M=3.56, SD=1.04; Perinatal Mental Health services: M=3.49, SD=1.11; Mental Health services: M=3.08, SD=1.05). They also reported greater skill in asking women about mood (M=3.26, SD=1.00) and anxiety (M=3.19, SD=1.01) compared to opening a discussion with women about self-injury or suicidal thoughts/behaviours (M=2.43, SD=1.02), alcohol and substance use (M=2.43, SD=.87), eating disorders (M=2.22, SD=.89), psychosis (M=2.04, SD=.99), intimate partner violence (M=1.97, SD=.91), and sexual abuse/violence (M=1.89, SD=.87).

PHNs rated their skill in developing care plans for women with depression (M=2.96, SD=1.04) and anxiety (M=2.61, SD=1.12) highest, and lowest in developing care plans with women who had thoughts of harming themselves (M=2.44, SD=1.18) or the baby (M=2.44, SD=1.17), or were experiencing obsessive thoughts (M=2.11, SD=1.02), delusions (M=2.03, SD=1.04) or hearing voices (M=2.03, SD=1.03). PHNs also reported greater skill in providing support to women who were traumatised by their birth experience (M=3.61, SD=1.01) and emotionally distressed (M=3.37, SD=.99) compared to providing support to those concerned about taking psychotropic medication (M=2.66, SD=1.03) or concerned about the hereditary nature of mental health problems (M=2.55; SD=.99) (Table 3).

Caseload

Information about caseloads was obtained by asking PHNs to estimate how many women experiencing a mental health issue they had cared for in the previous six months. Over 70% of PHNs reported caring for women with perinatal mental health problems, with the majority reporting caring for between 1-5 women in the previous 6 months (Table 4).

Perinatal mental health care practice

Over 80% of PHNs reported including mental health as a dimension of their assessment with women (87%, n=127) and asking women about their past mental health history/diagnosis (83.6%, n=122) in their clinical practice (Table 5). While over 80% reported asking women about mood disorder (all women: 56.2%, n=82; women identified at risk: 30.1%, n=44), psychological support available to them (all women: 54.1%, n=79; women identified at risk: 34.2%, n=50), and coping strategies (all women: 34.2%, n=50; women identified at risk: 48.6%, n=71), between 70-80% of PHNs reported never asking any woman about sexual abuse/sexual violence (81.5 %, n=119), intimate partner violence (77%, n=112) or experience of eating disorders (70.5%, n=103). Half of PHNs reported never asking any woman about past and current alcohol use (52.1%, n=76) or substance misuse (52.1%, n=76), with between 30-40% never asking any woman about psychosis (40.4%, n=59), self-injury/suicide thoughts (35%, n=52), past trauma/grief (34%, n=50) or anxiety/panic/OCD (31%, n=46) (Table 5).

Although 73% reported identifying women at risk of perinatal mental health problems, and approximately 70% indicated that they used screening tools (69.9%, n=102) to identify women at risk, just 55% reported developing a care plan with women who had a pre-existing mental health diagnosis. In the context of other supports to women and their family, just 60% (60.3%, n=88) reported discussing women's concerns related to psychopharmacology in pregnancy and breastfeeding, and providing information on PMHPs to women's partners/family (59.6%, n=87) (Table 5).

Education on perinatal mental health

Approximately 40% of PHNs reported that they never received education on perinatal mental health with approximately 41% reporting the availability of perinatal mental health education within their service (41.3%, n=69). Of those who received education, 40% had attended in-

service education, with the largest number indicating their perinatal mental health education was from their nurse/midwifery training. Those that had some PMH education had statistically significant higher confidence than those without PMH education (M=5.69; SD=1.78 vs. M=4.50, SD=1.95) (t(93.128)=3.40, p<.001) and also statistically significant higher skill (M=5.69, SD= 1.78 vs. M=4.50, SD=2.04) than those without any PMH education (t(129)= 3.588, p<.001). They also had statistically significant higher self-rated knowledge on all knowledge items compared to those without PMH education (Table 6).

Perinatal mental health services and guidelines

Nearly 60% of PHNs either reported an absence of policies or guidelines, or did not know if policies or guidelines on perinatal mental health existed, within their service (57.5%, n=96). Approximately one third of PHNs reported that there wasn't a designated place in women's health record to document a mental health history/assessment (28.1%, n=47), while 44% (n=74) indicated the absence of a designated place in women's record to document a mental health plan of care for women. Just over 50% of PHNs reported having guidelines on care pathways within their services (55.7%, n=93) and having access to specialist perinatal mental health services (52.1%, n=87) (Table 7).

Educational and practice priorities

Educational priorities identified by PHNs fell into three categories. The first category of need was knowledge of perinatal mental health issues, including the types, risk factors, medication issues, cultural differences, and attachment and bonding. The second category was education to enhance interviewing, assessment, support and counselling skills. The third category concerned the nature, format and context of perinatal mental health education, with specific

requests for regular, up-to-date, education from mental health specialist with opportunities for practical application of skills.

Practice priorities identified by PHNs included: increasing specialist perinatal services and supports for women and their partners/families; developing organisational care pathways, protocols, and guidelines to improve consistency and continuity of care; improved integration and communication between services and disciplines; and support to increase the amount of time available to PHNs to discuss mental health problems with women in the perinatal period. Perinatal mental health education and promotion for the general public, women and all clinical staff was also identified as a priority.

DISCUSSION

This is the first study in Ireland that explores PHNs knowledge, skill and practice in relation to perinatal mental health care, and the first internationally that has comprehensively examined PHNs' practices on the range of mental health issues that may impact on women in the perinatal period. Most PHNs involved in the study encountered women with PMHPs; however, the caseload of women cared for in the previous six months was reported as mostly between 1-5 women. While this number may suggest that PHNs do not meet women with mental health problems very frequently, it more likely represents an under-detection of women experiencing PMHPs given that NICE (2014) estimate that 15-25% of women will experience a mental health problem either during pregnancy or in the first year postpartum.

Findings also clearly indicate that PHNs possess better knowledge on some aspects of perinatal mental health, namely, depression, anxiety, risk factors, screening tools, and the impact of PMHPs on the mother and baby, compared to other areas, such as, bipolar affective

disorder, obsessive compulsive or ritualistic behaviour, eating disorders, self-injury/suicide in the perinatal period, personality disorders, drug use in pregnancy and breastfeeding, and legal aspects. Skills were also rated comparatively low in many of the areas where there were perceived deficits in knowledge. PHNs reported low skill levels in opening a discussion and asking women about psychosis, intimate partner violence, sexual abuse/violence and eating behaviours, as well as minimal skills in developing care plans with women who had thoughts of harming themselves or their baby, or were experiencing obsessive thoughts, delusions or hearing voices. Given that much of the international research involving PHNs tends to focus on postnatal depression, it is difficult to make comparisons; however, similar to the findings of this study, available research suggests that PHNs lack confidence in their skill and ability to gather information, identify and respond to the wide range of perinatal mental health issues (Agapidaki *et al.* 2014; Rollans *et al.* 2013), and are unsure about how to distinguish between distress which could be resolved with support and mental health problems that require specialist intervention (McConnell *et al.* 2005; Agapidaki *et al.* 2014).

In terms of screening and assessing women within practice, the study findings highlight that while PHNs generally enquire about women's mental health history, their experience of a range of perinatal mental health problems is not routinely investigated. High numbers of PHNs do not ask women about their trauma history, in particular intimate partner violence, sexual abuse/sexual violence, their history of eating disorders and psychosis or thoughts of self-injury/suicide. In other studies, mood, feelings and depression have been found to be key factors considered in the assessment of women's mental health, while salient risk factors, such as, history of self-harm/suicide, sexual abuse and domestic violence were rarely assessed routinely (Baldwin & Griffiths, 2009; Rollans *et al.* 2013). Personal discomfort and a perception that asking about these issues is too 'confronting' for women were identified as

factors contributing to PHNs and maternal child health nurses silence around these issues (Lau *et al,* 2015; Rollans et *al,* 2013).

The apparent reluctance of some PHNs to enquire about, or discuss the range of mental health problems such as psychosis and risk factors such as domestic violence also leaves women vulnerable and without adequate information and support. Evidence indicates that women with a prior history of psychosis (schizophrenia/ previous postpartum psychosis) (Munk-Olsen *et al.* 2009) or women with a diagnosis of bipolar disorder, especially those who discontinue psychotropic treatment or stop medication abruptly (Viguera *et al.* 2007; Wesseloo *et al.* 2016) are at an increased risk of relapse and developing postpartum psychosis. In addition, evidence also incidences a rise in the rates of domestic violence in pregnancy (Jeanjot *et al.* 2008; Taillieu and Brownridge, 2010), therefore PHNs need to adopt a more comprehensive approach towards screening and assessment of risk factors for mental health problems.

This study also indicates that there is a practice of 'selective screening', as most PHNs indicated that they only asked women with identified risk factors about their mental health rather than all women. The practice of 'selective screening' has been found in other studies, particularly in relation to domestic violence screening, with health professionals favouring 'selective' screening over routine screening in the belief that 'suspected cases' can be easily identified (Jeanjot *et al.* 2008). The potential implication of relying on selective screening is that women without an obvious presentation will be missed. Similarly, relying only on personal judgment may also result in those with significant risk factors, including those with a history of mental health problems not receiving the support required in the perinatal period (Heneghan *et al.* 2007; Anding *et al.* 2015). There is no doubt that the practice of exclusion

or selective screening is a reflection of PHNs' self-reported lack of knowledge and skill in perinatal mental health compounded by a lack of education and organisational practice guidelines (Higgins *et al.* 2017). It may also be a reflection of the wider public discourse, as internationally mental health literacy tends to be focused on depression and postnatal depression. Indeed, women in Higgins *et al.'s* (2016) Irish study were of the view that a 'conspiracy of silence' existed around wider perinatal mental health issues, such as psychosis and this was not just among the general public but among health practitioners.

While enquiring about and screening for past mental health problems or trauma experiences is important, the process of screening and assessment is only of value if it is followed with a plan of care, developed in collaboration with women (Borglin *et al.* 2015; Higgins *et al*. 2017) and other practitioners, such as members of the mental health team, or if a referral to specialist mental health services is made where appropriate. It was found in this study that care planning was not routinely practised by PHNs, as only 55% of the participants identified it as a core dimension of their practice and 65% of PHNs reported referring women to mental health services. While the lack of knowledge and skill found in relation to care planning in this study may account for some of the deficits in practice, especially in relation to care planning with women who experience obsessive thinking, have thoughts of harming themselves or their baby, hear voices or have delusional thinking, the lack of engagement with women about their mental health plan of care may also be attributed to poor support and guidance within services, as the study found that just over half of services had a place to document a mental health plan (53%). The absence of care pathways and services may also influence PHNs' practice, as several studies have shown that PHNs encounter difficulties in care planning following identification of a perinatal mental health problem, namely, due to the absence of clear referral pathways (Jomeen *et al.* 2013), a lack of knowledge about

community resources or a perception of inadequate services (Agapidaki *et al.* 2014), and a lack of resources and time to provide support and care to women with perinatal mental health issues (Chew-Graham *et al.* 2008; Rush, 2012; Borglin *et al.* 2015). These deficits, which are also reported in this study, resulted in some PHNs in other studies viewing identification of mental health problems as pointless (Chew-Graham *et al.* 2008) or being afraid to discuss mental health problems with women (Jomeen *et al*. 2013).

An important component of primary prevention of PMHPs is providing information to women a range of perinatal mental health problems which may develop, in order to increase awareness of signs and symptoms, to reduce stigma and fear around disclosure, and to alert them to help that is available (Glavin *et al.* 2010a; Tammentie *et al.* 2013). The provision of information is also important as it enables women to challenge 'myths' and 'fantasies' about pregnancy and motherhood (Tammentie *et al.* 2013; Borglin *et al.* 2015) and address mental health problems should they arise. While findings from this study suggest that the majority of PHNs discussed some aspects of mental health with women between 30-40% did not do so. In addition, self-reported skill level in providing information to women around psychotropic medication use and breastfeeding, and information about the hereditary nature of mental health problems was relatively low. While the lack of skill in relation psychopharmacology may be due to the lack of knowledge found among PHNs in this study, it may also be related to a perception that information provision on psychopharmacology is outside PHNs' role, as PHNs in other studies regard identification and diagnosis of depression and the provision of information related to prescribed medication to be the domain of practice of General Practitioners (McConnell *et al.* 2005; Chew-Graham *et al.* 2008). Whilst the provision of specialist information on the use of psychopharmacology during pregnancy and breastfeeding is certainly the remit of the prescribing medical practitioner, PHNs need to be knowledgeable

on the side-effects and know where, and how, to refer women for evidence-based information.

The provision of information to the woman's partner, significant other or family members is also regarded as essential in aiding their supportive other(s) to recognise when they require help and this practice is viewed as integral to facilitating a good outcome for the woman and indeed the whole family (Higgins, 2012; Stein *et al.* 2014; Higgins *et al*. 2017). The study results show that the provision of information on PMH to women's partners and family was practised by just 60% of PHNs, while skill in providing support to the woman's partner and family on various aspects of mental health were rated below the midpoint of the scale. PHNs in this study recognised the need for education on communicating and providing support to women's partners/family.

Education is recognised as essential to enhancing practitioners' confidence in perinatal mental health care (Glavin *et al.* 2010a; Jomeen *et al*. 2013), as is the availability of practitioner support, mentoring and supervision (Vik *et al.* 2009; Rush, 2012). The importance of education is evidenced in this study, as findings suggest that PHNs with PMH education had statistically significant higher self-reported confidence, skill and knowledge scores than those without any PMH education. However, for education to be truly impactful, it must be comprehensive, address the range of mental health issues (Jomeen *et al.* 2013), incorporate cultural competency (Almond & Lathlean, 2011), and be up-to-date and contemporary. 39% of PHNs in this study reported not having received any education in perinatal mental health, with those who reported receiving education, reporting that, for the most part, it was during their nursing/midwifery training, which, given the age profile and length of time participants reported working in their current role, suggests that education

received is potentially outdated. Deficits in education provision and inadequate preparation for their role in supporting women's perinatal mental health has been identified by PHNs in numerous studies (Almond & Lathean, 2011; Rollans *et al.* 2013; Agapidaki *et al*. 2014; Beauchamp, 2014), and some PHN's engage in self-directed learning, such as internet searching and accessing journal information, to fill gaps in knowledge (Brown and Bacigalupo, 2006). Like other studies, PHNs in this study identified education as an important priority (McConnell *et al.* 2005; Brown and Bacigalupo, 2006; Skočir and Hundley 2006; Mivsek *et al.* 2008; Almond and Lathlean, 2011; Agapidaki *et al*. 2014), with education being sought in relation to the range of PMHPs, incidence and risk factors as well as broader topics such as bonding and attachment, and cultural and legal issues. Indeed, the low self-reported knowledge on legal aspects of caring for women experiencing mental health problems is concerning given that women may require emergency or involuntary mental health treatment and the PHN may play an active role in this process. Additionally, as with the PHNs in Agapidakei *et al.*'s (2014) study, the PHNs in this study also prioritised education and training in communication skills and strategies to enhance their comfort and confidence to have a discussion on all aspects of mental health with women, and not just depression.

LIMITATIONS

The generalisability of the study findings is limited by the fact that it is unknown whether the sample obtained was representative of the PHN population and the fact that response bias may have been present with those more positively disposed to perinatal mental health care completing the survey. Another limitation of the study is that PHNs' practices are self-reported, so there is no way of knowing how consistent the reported practice is with their actual clinical practice. A final limitation of this study is that there may have been a

heightened risk of making a Type 1 error, that is detecting a statistically significant difference when in fact none is present, due to the fact that multiple analyses were conducted.

CONCLUSION

This paper demonstrates that PHNs have greater competence in some areas of perinatal mental health, such as postnatal depression, and report less knowledge, skill and confidence to identify, support and care for women who experience a broad range of other mental health problems in the perinatal period. This is no doubt related to perinatal mental health education and a lack of organisational guidelines to support their practice. The findings from this study clearly indicate that PHNs are positive about their role in supporting women who experience mental health issues; however, they desire the education and guidance to support them to identify women's needs, communicate on sensitive subjects and provide the necessary evidence-based support to women and their families.

RELEVANCE TO CLINICAL PRACTICE

This study has significant implications for education, practice and research. If PHNs are to provide comprehensive care, they need to be confident to discuss and plan for a range of perinatal mental health problems with women, such as psychosis, bipolar disorders, depression during pregnancy, eating disorders, suicide, obsessive or ritualistic behaviour, the use of psychotropic medication and legal issues of care. They also need to have knowledge in how to access the expertise and support of mental health practitioners in caring for women with mental health issues. In addition, there is a need for services to review their documentation to ensure that mental health is visible as an aspect of assessment and care planning, and that guidelines and care pathways are available to support PHNs in their role.

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Table 1: Demographic profile

		N	%
Age	25-34 years	20	10.8
	35-44 years	47	25.2
	45-54 years	78	41.9
	55+	41	22.0
Highest level of qualification	Certificate/Diploma	30	16.2
	Degree	22	11.8
	Postgraduate diploma/Masters	134	72
Midwifery/Nursing Qualification*	RGN	175	-
	RM	148	-
	RPN	41	-
	RSCN/RNID/RNP/RMP	20	-
Area employed	Public health nursing services	173	93.0
	Community services	6	3.2
	Other	7	3.8
Length of time in role	0-5	38	20.4
	6-10	47	25.3
	11 years+	101	54.3

*Participants could select more than one answer

Table 2: Self-rated knowledge of perinatal mental health (n=138)

How would you rate your knowledge (1-5) on:	Mean	SD
Perinatal depression (antenatal and postnatal depression)	3.56	.83
Impact of maternal mental health problems on mothering	3.33	.98
Perinatal anxiety (antenatal and postnatal anxiety)	3.19	.97
Risk factors for developing mental health problems in the perinatal period	3.15	.94
Services available to support women with perinatal mental health issues	3.10	1.01
Screening tools for perinatal mental health problems	3.01	1.17
Impact of maternal mental health problems on the foetus/baby	3.01	1.03
Obsessive thinking related to perinatal mental health	2.38	1.02
Alcohol misuse in the perinatal period	2.38	1.00
Psychosis in the perinatal period	2.35	1.04
Post-traumatic stress disorder	2.22	.98
Substance misuse in the perinatal period	2.21	1.00
Legal aspects of caring for women experiencing mental health problems, and their babies	2.08	.97
Drug use in pregnancy and breastfeeding	2.07	.96
Bipolar affective disorder	2.02	.95
Self-injury/suicide in perinatal period	2.01	.98
Eating disorders and pregnancy	1.98	.97
Obsessive compulsive or ritualistic behaviour	1.88	.90
Personality disorders	1.83	.83

Table 3: Self-rated skills in undertaking perinatal mental health activities

Rate your skill in:		**Mean**	**SD**
Opening a discussion and asking women about:	Mood	3.26	1.00
	Anxiety	3.19	1.01
	Self-injury or suicidal thoughts/behaviours	2.43	1.02
	Alcohol and substance use	2.43	.87
	Eating behaviours	2.22	.89
	Psychosis	2.04	.99
	Intimate partner violence	1.97	.91
	Sexual abuse / sexual violence	1.89	.87
Providing support (informational, emotional, practical) to women who are:	Traumatised by their birth experience	3.61	1.01
	Emotionally distressed	3.37	.99
	Concerned that they may develop mental health problems	3.24	.96
	Concerned about taking psychotropic medication while pregnant or breastfeeding	2.66	1.03
	Concerned about the hereditary nature of mental health problems	2.55	.99
Providing support to partners/ family members who are concerned about:	The safety of the baby	3.19	.98
	The woman's mental health	3.08	.96
	Own mental health	3.08	.95
	The woman's safety	3.04	.95
	The impact of the woman's mental health on foetus/baby	2.98	.98
Developing a plan of care with women who:	Are experiencing depression	2.96	1.04
	Are experiencing severe anxiety	2.61	1.12
	Have thoughts about harming their baby	2.44	1.18
	Have thoughts about harming themselves	2.44	1.17
	Have obsessive thinking	2.11	1.02
	Are hearing voices	2.03	1.03
	Are having strange or unusual thoughts (delusions)	2.03	1.04
Discussing with women the need to consult with and/or refer to:	Primary care (GP/Public Health Nurse)	4.21	.88
	Child Protection Services	3.82	.99
	Social worker	3.64	1.01
	Drug and alcohol Services	3.56	1.04
	Perinatal Mental Health services (nurse/midwife/psychiatrist)	3.49	1.11
	Mental Health services (nurse /psychiatrist/psychologist/counsellor)	3.08	1.05
Asking for advice or assistance on mental health issues from:	Colleagues	4.20	.92
	Managers	4.11	.97
	Adult mental health services	3.62	1.15
	Perinatal mental health services	3.55	1.22

Table 4: No. of women experiencing perinatal mental health issues cared for in the past 6 months

No. of women	**N=125**	**%**
1-5	99	79.2
6-10	15	12.0
11-15	9	7.2
16+	2	1.6

Table 5: Perinatal mental health activities and assessment practices

In your clinical practice, do you?	**Yes**	**No**	**Not part of my role**
Include mental health as a dimension of the assessment you complete with women	87	4.8	8.2
Ask women about their past mental health history/ diagnosis	83.6	8.9	7.5
Identify women's protective/coping strategies for maintaining mental health	78.1	13.7	8.2
Discuss the nature of perinatal mental health problems with women	74	14.4	11.6
Identify women at risk of perinatal mental health problems	73.3	13.7	13
Use mental health tools to screen for or assess mental health problems	69.9	21.9	8.2
Refer women to mental health services	64.4	22.6	13
Discuss women's concerns related to psychopharmacology in pregnancy and breastfeeding	60.3	27.4	12.3
Provide information on perinatal mental health problems to women's partners/family	59.6	28.8	11.6
Develop a care plan with women who have a pre-existing mental health diagnosis	54.8	34.9	10.3
Refer women with mental health issues to child protection services (indirectly through social worker or directly)	50.7	42.5	6.8
Do you ask women about?	**Never ask a woman**	**Ask women with mental health risk factors**	**Ask all women**
Experience of sexual abuse/sexual violence	81.5	16.4	2.1
Experience of eating disorders	70.5	24.7	4.8
Experience of intimate partner violence	76.7	17.8	5.5
Experience of psychosis	40.4	52.7	6.8
Self-injury/suicidal thoughts/behaviour	35.6	50.7	13.7
Past and current substance use	52.1	32.2	15.8
Past and current alcohol use	52.1	27.4	20.5
Experience of anxiety/panic/OCD	31.5	41.8	26.7
Past trauma/grief/loss experiences	34.2	38.4	27.4
Usual mental health coping strategies	17.1	48.6	34.2
Psychological support available to them	11.6	34.2	54.1
Experience of mood disorders (depression, bipolar affective disorder)	13.7	30.1	56.2

Table 6: Knowledge among those with and without some perinatal mental health education

Knowledge	Some Education in PMH						T-Test
	Yes			No			
	N	Mean	SD	N	Mean	SD	
Risk factors for developing mental health problems in the perinatal period	86	3.43	.83	52	2.69	.92	t(136)= 4.847, p<.001***
Perinatal depression (antenatal and postnatal depression)	86	3.71	.76	52	3.31	.88	t(136)= 2.829, p=.005**
Perinatal anxiety (antenatal and postnatal anxiety)	86	3.37	.91	52	2.88	1.00	t(136)= 2.937, p=.004**
Obsessive thinking related to perinatal mental health	86	2.60	1.00	52	2.02	.96	t(136)= 3.389, p<.001***
Screening tools for perinatal mental health problems	86	3.29	1.05	52	2.56	1.21	t(136)= 3.748, p<.001***
Eating disorders and pregnancy	86	2.12	.99	52	1.75	.90	t(136)= 2.178, p=.031*
Psychosis in the perinatal period	86	2.53	1.01	52	2.04	1.01	t(136)= 2.792 , p=.006**
Bipolar affective disorder	86	2.16	.98	52	1.79	.87	t(136)= 2.265, p=.025*
Post-traumatic stress disorder	86	2.36	1.05	52	1.98	.80	t(128.482)= 2.388, p=.018*
Psychotropic drug use in pregnancy and breastfeeding	86	2.23	.94	52	1.81	.93	t(136)= 2.581, p=.011*
Self-injury/suicide in perinatal period	86	2.20	1.02	52	1.69	.83	t(136)= 3.029, p=.003**
Alcohol misuse in the perinatal period	86	2.53	.99	52	2.12	.96	t(136)= 2.436, p=.016*
Substance misuse in the perinatal period	86	2.36	1.00	52	1.96	.95	t(136)= 2.307, p=.023*
Personality Disorders	86	2.00	.87	52	1.56	.70	t(136)= 3.116, p=.002**

Obsessive compulsive or ritualistic behaviour	86	2.14	.88	52	1.46	.75	t(136)= 4.612, p<.001***
Impact of maternal mental health problems on the foetus/baby	86	3.21	.92	52	2.69	1.11	t(136)= 2.951, p=.004**
Impact of maternal mental health problems on mothering	86	3.50	.88	52	3.06	1.09	t(136)= 2.613, p=.010*
Services available to support women with perinatal mental health issues	86	3.31	.95	52	2.75	1.01	t(136)= 3.306, p<.001***
Legal aspects of caring for women experiencing mental health problems, and their babies	86	2.26	.96	52	1.79	.94	t(136)= 2.797, p=.006**

*p<.05 **p<.01 ***p<.001

Table 7: Perinatal mental services and guidelines

Does your service have?	Yes	No	Don't know
A designated place in women's record to document a mental health history/assessment	68.9	28.1	3
Care pathways for women experiencing a mental health problem	55.7	32.3	12
A designated place in women's record to document a mental health plan of care for women	52.7	44.3	3
Access to specialist perinatal mental health services	52.1	36.5	11.4
Policy/guidelines on perinatal mental health	42.5	37.1	20.4
In-service education on perinatal mental issues	41.3	45.5	13.2