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Women's Experiences of Perinatal Mental Health: A qualitative exploration of women's experiences of mental health during pregnancy and a review of women's views of Peer Support Interventions and their effectiveness

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Doctorate in Clinical Psychology

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July 2018

Submitted in part fulfilment of the degree of Doctorate in Clinical Psychology at the University of Edinburgh

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Acknowledgements

First and foremost, I would like to thank all of the women who participated in my project and told me about their experiences. I hope that I have been able to adequately convey your experiences and that this project can help influence changes and help other women struggling during pregnancy. I wish to also thank the Perinatal Mental Health Service, and the staff at the maternity hospital for all their help with recruitment and throughout my project.

I would like to thank my supervisor Dr Angus MacBeth for all his help, support, guidance and advice. Thanks for your patience and encouragement, particularly over the last 6 months. Thank you also to Dr Fiona Smith for your help with my project.

To my fellow trainees, our DClin family, I could not have imagined a better group of people to have gone through training and all its highs and lows with. I'm left with so many great memories and friendships for life.

Caroline, I literally cannot thank you enough for all your support throughout training. Thank you so much for all the laughter and fun. I'm looking forward to starting qualified life with you and carrying the dream team on.

Thank you to all my friends from my pre-doctorate life. You have all been so patient and supportive over the last 3 years. I can't wait to see you all again soon.

To my Mum, Dad and Calum, thank you for everything. You have always believed in me. You've encouraged and supported me from when I first decided I wanted to become a clinical psychologist through to finishing my thesis and that has meant so much. Thanks for all your support over the last few months particularly.

Finally, I want to dedicate this thesis to Scott. I really don't have the words to thank you enough for everything over the last 3 years, and before, on this clinical psychology journey. You've been here supporting me every step of the way, helping me stay calm, encouraging me to keep going and getting me through. I really couldn't have done this without you. Thank you for it all.

Contents Page

Declaration of own work form	Page 1
Acknowledgements	Page 2
Research Portfolio Abstract	Page 7
Research Portfolio Lay Summary	Page 10
Systematic Review Journal Article: Women’s views of Peer Support Interventions for Perinatal Mental Health and their effectiveness: A Mixed Methods Systematic Review	Page 12
Systematic Review Abstract and highlight points	Page 13
1. Introduction	Page 15
2. Method	Page 20
2.1 Search Strategy	Page 20
2.2 Inclusion and Exclusion	Page 21
2.3 Data Extraction	Page 22
2.4 Quality Assessment	Page 22
3. Results	Page 24
3.1 Study Characteristics and Design	Page 24
3.2 Outcome Measures	Page 24
3.3 Mental Health Focus	Page 25
3.4 Types of Intervention	Page 26
3.5 Timing of Intervention	Page 27
3.6 Qualitative Synthesis	Page 29
3.6.1 Peers viewed as positive	Page 35

<p>and an accepted deliverer of interventions</p> <p>3.6.2 Shared experience of motherhood promotes opening up</p>	<p>Page 35</p>
<p>3.6.3 Peer interactions produced learning and sharing of advice</p>	<p>Page 35</p>
<p>3.6.4 Peer interactions resulted in acceptance and of feeling safe</p>	<p>Page 36</p>
<p>3.7 Study Quality</p>	<p>Page 36</p>
<p>3.8 RCT and other Quantitative designs</p>	<p>Page 37</p>
<p>3.9 Mixed Methods</p>	<p>Page 39</p>
<p>3.10 Qualitative</p>	<p>Page 40</p>
<p>4. Discussion</p> <p>4.1 Limitations of Papers</p> <p>4.2 Issues in the Wider Literature</p>	<p>Page 54</p> <p>Page 58</p> <p>Page 59</p>
<p>4.3 Limitations of the Review</p> <p>4.4 Clinical Implications</p> <p>4.5 Future Research</p>	<p>Page 60</p> <p>Page 60</p> <p>Page 61</p>

Recommendations	
4.6 Conclusion	Page 62
Systematic Review References	Page 64
Journal article 2: Empirical Project 'It's not all glowing and kale smoothies': An exploration of mental health difficulties during pregnancy through women's voices	Page 72
Empirical Project Abstract and Practitioner Points	Page 73
Introduction	Page 76
Method	Page 83
Results	Page 88
Discussion	Page 102
Empirical Project References	Page 110
Combined Reference List	Page 115
Appendices	
Appendix 1 – Journal of Affective Disorder Guidelines	Page 128
Appendix 2 – Full List of Search Terms by Database	Page 132
Appendix 3- MMAT quality assessment rating example - Qualitative	Page 135
Appendix 4- MMAT quality assessment rating example – Mixed Methods	Page 139

Appendix 5 – Quality Assessment Rating Example - RCT Appendix 6 – Journal Guidelines for Psychology and Psychotherapy: Theory, Research and Practice (2018)	Page 149 Page 156
Appendix 7 - Ethical Approval confirmation	Page 159
Appendix 8 - Local Research and Development Department Approval	Page 163
Appendix 9 – Participant Information Sheet	Page 165
Appendix 10- Participant Opt-in	Page 170
Appendix 11 – Consent Form	Page 171
Appendix 12 – Interview Schedule	Page 173
Appendix 13 - Sample of Transcript with Coding Emergent Themes	Page 174
Appendix 14 – Original Research Proposal	Page 175

Research Portfolio Abstract

Background and Aims:

Mental health difficulties during the perinatal period (pregnancy to 1 year postnatal) are commonplace and are associated with significant impacts for mothers and infants. There is an acknowledgement that more needs to be understood about perinatal mental health, particularly during pregnancy, and that service and treatment options need to be improved.

Women's lived experience of difficulties during pregnancy, particularly when experiencing moderate to severe mental health difficulties, is a little researched area.

A need for wider treatment options than medication alone has been highlighted and Peer Support Interventions (PSIs) are often considered within this area. Despite this, there is yet to be a review of their effectiveness to date that also considers women's views of such interventions. Therefore, this thesis aimed to systematically review literature focused on women's views of PSIs and their effectiveness. In addition, it also aimed to explore the lived experience of women with moderate to severe difficulties with their mental health during pregnancy, with a focus on trying to establish any psychological needs/needs they may have.

Methods:

A mixed methods systematic review was conducted to meet the aims on PSI interventions. This involved searching electronic databases, quality assessment of included papers and summarising results, including a meta-synthesis for qualitative findings. The empirical project, on women's lived experiences, utilised an

Interpretative Phenomenological Analysis approach to explore the lived experience of women experiencing moderate to severe mental health difficulties during pregnancy. Semi-structured interviews were conducted with 11 women recruited via a specialist perinatal mental health service.

Results

Thirteen studies were included in the review. Results highlighted the heterogeneity of types of PSIs and methodologies employed to evaluate these. Most studies focused on PSIs for the postnatal period and were often aimed at depression. There was a lack of research on PSIs targeted antenatally, or for other types of mental health difficulties. There was tentative evidence for the use of telephone based PSIs in reducing depressive symptomatology postnatally, but less evidence for the use of other types of PSI, or for interventions during pregnancy. The qualitative evidence highlighted the acceptability of PSIs to women and a meta-synthesis of qualitative research identified a number of themes representing women's views of PSIs.

From the empirical project, several Superordinate themes were identified: Need for acceptance, Need for awareness, Search for explanations, What helped, Emotional intensity, Societal influences and Service provision. Within these a range of emergent themes were also found. These themes highlighted possible psychological needs and other needs during this time, as well as providing a greater understanding of women's lived experience.

Conclusions:

There is a need for more research to establish effectiveness of PSIs during pregnancy and of other modes of delivery and to build on existing findings on the effectiveness of telephone based PSIs. Women viewing PSIs as highly acceptable

for perinatal mental health difficulties, should cause services to consider their use, or other opportunities for sharing of peer advice/information.

Themes identified from the empirical project highlight the need for greater awareness and acceptance of mental health difficulties during pregnancy, as well as the impact of societal influences on women during this time, and the role clinicians and services could play in achieving greater awareness. Small changes within services could help raise awareness levels and help women feel less isolated.

Research Portfolio Lay Summary

This thesis explored women's experiences of having difficulties with their mental health during pregnancy, their views of Peer Support Interventions and how helpful these interventions are thought to be. From pregnancy to 1 year after birth is known as the perinatal period. Experiencing difficulties with mental health during the perinatal period is relatively common. Research is being carried out to find out more about what this is like, what treatments could be helpful and how to best support people at this time. A lot of current research is focused on women's experiences after birth or on asking them about what they think of services and treatment options. There is less research asking women about their experience having difficulties with their mental health during pregnancy and therefore less is known about what needs they may have at this time. This thesis aimed to find out more about women's experiences during pregnancy by asking them during individual interviews. Eleven women took part in interviews.

Research has shown that there is a need for more types of treatment, instead of just medication and one option that is being offered is based on peer support. Peer support is when someone who has gone through similar life experiences, and often is currently managing to cope with any difficulties they had, provides support. There are lots of different ways that peer support is offered during the perinatal period, including: over the telephone, face to face or in group settings. Less is known about how effective peer support is for women with perinatal mental health difficulties, this research therefore aimed to find out how effective these options are and what women think of them.

This thesis reviewed published research looking at peer support for women experiencing perinatal mental health difficulties and found that there is some evidence to show that certain types of peer support may be effective for certain

types of difficulties. It seems that telephone-based peer support may help women experiencing depression after birth. The review also found that peer support is very acceptable to women during the perinatal period and found out more about what they thought of it.

From the interviews where women were asked about their experiences of mental health difficulties during pregnancy, we found out more about what needs women might have at these times, what is important to them and what might help in the future. We found out that there is a need for more people to know about mental health difficulties during pregnancy and for people to be more accepting of these difficulties. We found out about what women thought could make services better and how they thought society and the way people talk about pregnancy influenced how they felt.

From this research we know that women find peer support acceptable and that some types of peer support may be helpful in the perinatal period, therefore services should try to think about how they could offer chances for women to access peer support. We also need more research to find out if peer support is helpful during pregnancy and if other types of peer support are effective.

From the results of asking women about their experiences we know that services that support people when they are pregnant need to talk to women more about the possibility of having difficulties with their mental health. Other findings from these results could help clinicians and services to think about other ways to help women at this time. There is a need for more research in this area and to see if other women with mental health difficulties during pregnancy agree with what we found and to ask those not currently getting help from services about their experiences.

**Women's views of Peer Support Interventions
for Perinatal Mental Health and their
effectiveness: A Mixed Methods Systematic
Review**

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Word count: 7863 (excluding figures, tables, references and appendices).

Conflicts of interest: none

Written in accordance with submission guidelines for Journal of Affective Disorders (Appendix 1)

Abstract

Background: Perinatal mental health difficulties have significant impacts on mothers and infants. There is a need for wider treatment options with Peer Support Interventions (PSIs) increasingly offered to women perinatally. We reviewed the effectiveness of PSIs during the perinatal period alongside reviewing qualitative literature regarding women's views of PSIs.

Methods: A mixed methods systematic review was conducted using the following databases: OVID Medline, EMBASE, CINAHL and Psych Info. Relevant journals and reference lists of included papers were hand searched.

Results: Thirteen studies were included, the majority targeted depression and were postnatally focused, with less during pregnancy. Promising evidence emerged for telephone-based PSIs in reducing depressive symptomatology postnatally, with less evidence for other types of PSI or within pregnancy. The qualitative evidence highlighted the acceptability of PSIs to women. A meta-synthesis of qualitative research identified the following themes: 'peers are viewed as positive and an accepted deliverer of interventions', 'the shared experience of motherhood promotes opening-up', 'peer interactions produced learning and sharing of advice' and 'peer interactions resulted in acceptance and of feeling safe'.

Limitations: Types of PSIs were highly varied as were methodologies for evaluation, resulting in a heterogenous literature. This impacted on the ability to draw conclusions on overall effectiveness.

Conclusions: Women viewing PSIs as highly acceptable for perinatal mental health difficulties, should cause services to consider their use or other opportunities for sharing of peer advice/information. There is a need for further research to establish PSIs effectiveness during pregnancy and of other modes of delivery.

Key words: Perinatal, Pregnancy, Postnatal, Peer Support, Social Support, Mental Health

Highlights

- PSIs are highly acceptable to women during the perinatal period and provide unique opportunities for a safe, non-judgemental space where valued advice and learning can be shared.
- Methodologies used to evaluate perinatal PSIs are varied, limiting conclusions about overall effectiveness
- There is promising evidence for the effectiveness of Telephone based PSIs for postnatal depression
- Face to face and group interventions require more research to establish effectiveness in the perinatal period

1. Introduction

Many women experience difficulties with their mental health during the perinatal period (from pregnancy to one year postnatally). Prevalence rates vary, with meta-analytic estimates suggesting 10-15 of every 100 women experience difficulties with depression or anxiety during pregnancy (Bennett et al 2004; Heron et al 2004). Prevalence estimates for postpartum depression (PPD) range from 3% to 25% of women in the first year post birth (Dennis 2003). Prevalence rates of other mental health difficulties vary, with postpartum psychosis estimated to affect around 1% of mothers (Sit et al 2006). The impact of perinatal mental illness can be devastating with suicide a leading cause of maternal death in the UK (Knight & Tuffnell 2018). There are also recognised long-term impacts including those on both mother and child, with attachment difficulties, emotional difficulties, developmental delay and behavioural problems in children all linked to PPD (Dennis 2003).

Evidence suggests that the option to access alternatives to pharmacological treatment is important to women during the perinatal period (Dennis & Hodnett 2007). Up to 50% of mothers refuse medication for PPD due to concerns including the health of their baby, impact on breastfeeding and personal concerns around addiction (Strass 2002). There is increasing evidence that during the perinatal period women would prefer psychological therapies, or other non-pharmacological treatments ahead of medication. Goodman (2009) found that 92% of pregnant women surveyed stated they would seek therapy for depression and only 35% medication. Sleath et al (2005) found that pregnant women would rather access counselling or a support group, than medication during pregnancy. This is echoed postnatally, with women indicating a preference for psychological treatments over medication (Chabrol et al 2004; Pearlstein et al 2006; Whitton et al 1996). One

option to increase access to a broader range of treatments has been via peer support schemes/interventions (Atif et al 2017; Cust 2016; Dennis 2003; Dennis et al 2009; Letourneau et al 2015; Jones et al 2015). Peer support offers an alternative treatment option where access to psychological therapies may be difficult due to barriers facing individuals (Goodman 2009), or service and resource constraints.

Lack of social support has been implicated as a risk factor for PPD via qualitative and meta-analytic evidence (Dennis 2003; O'Hara & Swain 1996). Furthermore, not having someone to open up to who has experienced similar difficulties leads to increased risk of PPD (Brugha et al 1998). Social support is acceptable to mothers (Dennis & Chun-Lee 2006) and, if adequate, acts as a protective factor reducing risk of PPD (Rodrigues et al 2003; Savarimuthu et al 2010; Sawyer et al 2010). In addition, mothers with PPD may use connecting with others who have similar experiences to normalise their symptoms and as a source of empathy (Scrandis 2005). Therefore, interventions building on social or peer support may be beneficial in treating postnatal difficulties.

Peer support, although often not clearly defined, generally includes support from individuals who have shared life experiences with those they are supporting, have similar characteristics and are not professionals (Dennis 2003; Jones et al 2014; Pfeiffer et al 2011). Peer support in health care includes telephone-based support (Dennis 2003; Dennis et al 2009; Letourneau et al 2015), groups (Field et al 2013; Montgomery et al 2012) and face to face support (Cust 2016; Letourneau et al 2011; Jones et al 2015). Telephone-based support and face to face via home visits can offer a more flexible alternative to traditional health care provision overcoming difficulties individuals may have getting to appointments (Pfeiffer et al 2011).

Peer Support Interventions (PSIs) have efficacy in treating depression (Pfeiffer et al 2011) and have been successfully utilised in other areas including trauma recovery

and chronic illness (Cohen et al 2000). More recently evidence has emerged for their use in the perinatal period (Dennis 2003). Dennis (2003) piloted the use of telephone-based PSI for treating postnatal depression, designing an intervention 'Mothers Helping Mothers with Postpartum Depression'. This programme involved peers providing informational, appraisal and emotional assistance via telephone-based social support (Dennis 2003). Mothers who had previously experienced postpartum depression were trained and provided with a handbook to support the intervention. Volunteer coordinators were involved in training and supporting peers as well as matching them to mothers with similar demographic qualities. The frequency of interaction was not pre-determined and instead peers were asked to provide support as they deemed necessary to meet the individual mother's needs (Dennis 2003). Mothers who received the PSI were found to have reduced depressive symptomatology, providing preliminary evidence for PSI effectiveness for PPD and highlighting the need for further research (Dennis 2003).

Dennis et al (2010) highlighted several models that could explain how peer support works including: the direct effect model (Cohen et al 2000), the mediator effect model (Stewart & Tilden 1995) and the buffering effect model (Cohen et al 2000). The direct effect model proposes that peer support fulfils unmet social needs, reducing isolation, (Cohen et al 2000), evidence for this could be drawn from the research around lack of social support increasing risk of developing PPD (Dennis 2003). The mediator effect model suggests that peer support works as a mediator, in the development of stress by enhancing other protective factors (Stewart & Tilden 1995). Dennis (2003) highlighted that support from peers may women's resilience and protect from PPD, by increasing support and self-efficacy, which could support this model (Dennis 2003). Finally, the buffering effect model suggests that peer

support enhances coping strategies and protects against the impact of stress (Cohen et al 2000). Additionally, Solomon (2004) suggested that existing psychological theories could explain how peer support works, however based this on observations and not empirical evidence (Solomon 2004; Watson 2017). Watson (2017) conducted a literature review to explore underlying mechanisms and highlighted five themes that underpinned peer support relationships (Watson 2017). This provides some understanding of underlying mechanisms, based on qualitative research, but there is still a lack of evidence to support a model or mechanism by which peer support works.

Due to the increases in studies evaluating perinatal PSIs a systematic literature review of the effectiveness was warranted. Two previous reviews (Leger & Letourneau 2015; Jones et al 2014), focused on qualitative aspects or narrative understandings of peer support. Jones et al (2014) found four themes in the impact of peer support, these were: '(1) Isolation: the role of peer support, (2) Seeking validation through peer support, (3) The importance of social norms of motherhood, and (4) Finding affirmation/a way forward (Jones et al 2014). Leger and Letourneau (2015) reviewed PSIs aimed at Postnatal Depression (PND) and via a narrative approach, highlighted the variations in types of intervention provided, training, length of intervention and challenges in providing PSIs, as well as suggesting recommendations (Leger & Letourneau 2015).

Leger and Letourneau (2015) highlighted a limitation of their review, which was a lack of ensuring interventions were carried out by individuals with shared experiences and underlined the need for a review with a focus on peer support specifically, rather than volunteers, featuring clear inclusion/exclusion criteria. Their review was also only focused on the postnatal period. Jones et al (2014) highlighted

the need for further research to establish which structures or formats of peer support were most successful.

Aim of the current review

A mixed methods approach was adopted to establish effectiveness of PSIs, build on the findings of previous reviews and to ensure women's views were represented. It was thought vital to incorporate women's views to ensure their voices were considered within the development of future services and interventions. Exploring women's views could lead to a greater understanding of the way that PSIs work. The review aimed to address: *how effective perinatal PSIs were for mental health and what women's views are on such interventions*. Additionally, the review sought to establish the comparative effectiveness of different PSI delivery methods, and address sources of bias in the literature.

2. Method

2.1 Search Strategy

The review followed PRISMA guidelines (BMJ 2009). Four electronic databases were searched: OVID Medline, EMBASE, CINAHL and Psych Info. Search terms were developed using MESH terms and key words, adapted for each database. The search terms were: “Pregnancy” or “Pregnant women” or “Perinatal care” or “Postnatal care” or “Postpartum period” or “Mothers” or “Motherhood” or “Prenatal care” or “Antenatal (key word)” or “Postnatal (keyword)” or “perinatal (key word)” AND “Puerperal disorders” or “Depression” or “postpartum Depression” or “Anxiety disorders” or “Depressive disorder” or “Anxiety” or “Mental disorders” or “Mental health” AND “Peer group” or “Social support” or “Psychological stress” or “Lay support” or “Peer support (key word)” or “Support worker (key word)” or “Non-professional support (key word)” (see Appendix 2 for full list of search terms). Searches took place on 16th February 2018.

Duplicate articles were removed and remaining titles/abstracts were screened by the reviewer using the inclusion and exclusion criteria. A second rater assessed 10% of titles and abstracts to ensure consistency. Full texts were sought for articles where further information was required to decide if eligibility was met. Articles meeting inclusion criteria were included for full text review. Figure 1 lists the flow of inclusion/exclusion.

To ensure no relevant articles were omitted, several relevant journals were hand searched for publications within the last 5 years. The journals searched included: BMC Pregnancy and Childbirth, Midwifery, BMC Psychiatry, International Journal of Mental Health Nursing and Journal of Reproductive and Infant Psychology. Reference lists were examined for all included papers. Two additional papers were

found but were excluded at full text screening. Following screening of abstracts and titles, 105 articles were included for full text review (see Figure 1), of which 13 met the inclusion/exclusion criteria. Where eligibility was unclear the second author was consulted and a consensus was reached (n=7).

2.2 Inclusion and Exclusion Criteria:

The following inclusion criteria were applied:

- Papers evaluating peer support as a method of intervention either qualitatively (women's experiences) or quantitatively
- Intervention focusing on treating perinatal mental illness or distress
- Interventions facilitated by individuals with similar lived experiences (peer support)
- Interventions conducted during the perinatal period
- Written in English (due to lack of feasibility for translation)

The following exclusion criteria were applied:

- Interventions not aimed at treating mental health/distress
- Interventions that took place outwith the perinatal period
- Interventions facilitated by professionals
- Abstract/conference proceedings
- Outcomes focused on infants/children and not on mental health/distress
- Participants recruited on basis of other factors rather than mental health/distress

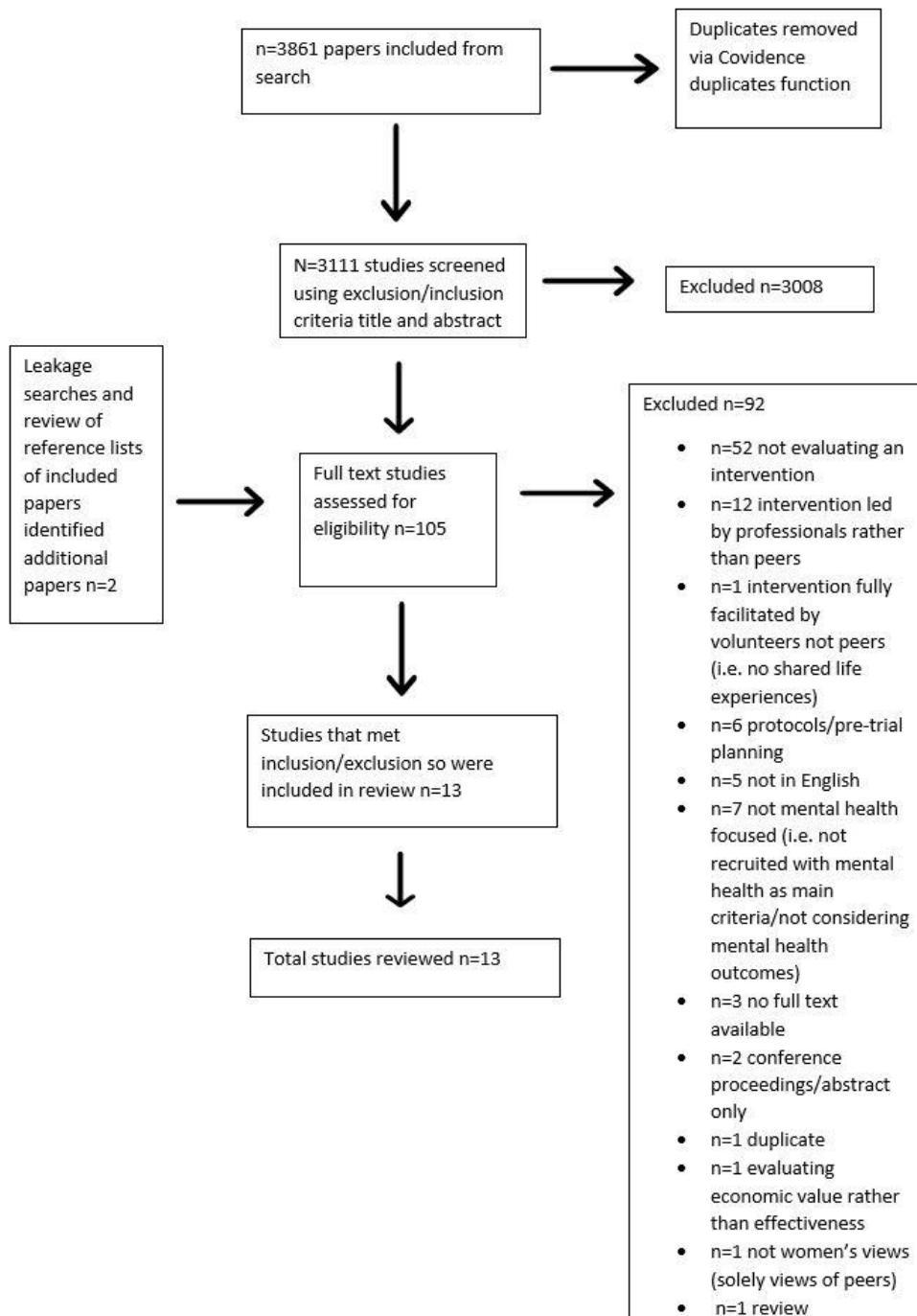
2.3 Data Extraction

A bespoke proforma was developed to extract information on demographics and key findings. The information extracted included: sample characteristics and size, details of peers, details of the intervention and mental health outcomes reported. Extracted data is displayed in Tables 2 and 3.

2.4 Quality Assessment

Quality assessment was carried out using an adapted version of the Mixed Methods Appraisal Tool (MMAT) (Pluye et al 2009), see appendices 3-5 for examples. The MMAT allows for quality appraisal of a range of study design including qualitative, quantitative and mixed method designs. The tool was adapted to include additional questions to assess RCT studies recruitment, use of outcome measures and whether or not appropriate analysis was conducted in all quantitative studies. In addition, a rating of 'partially met' was added to the outcome ratings, resulting in the following outcome ratings: yes, partially met, no and can't tell. A second assessor rated all included papers, with an initial interrater agreement of 91.4% on all criteria. None of the ratings differed by more than one point. After discussions about any discrepancies 100% agreement was reached.

Figure 1- Flowchart of Study Selection



3. Results

3.1 Study characteristics and design

Thirteen papers were included, representing n=1527 mothers, with sample sizes ranging from n=7 (Montgomery et al 2012) to n=701 (Dennis et al 2009). Of the included studies, five were Randomised Control Trials (RCTs), four were mixed method designs, three were qualitative and the final paper included was a quantitative quasi-experimental design without a control group. Two qualitative studies shared one cohort of participants (Atif et al 2016; Atif et al 2017) as did Dennis et al 2009 (RCT) and 2010 (mixed methods design). Studies were conducted between 2003 and 2017 from a range of high and low resource settings (UK (n=2), Australia (n=2), Canada (n=6), USA (n=1), India and Pakistan (n=2)). The age range, from studies where age was reported, was between 16-45 years. The primary method of data collection within the qualitative studies, and qualitative aspect of mixed method papers, was interviews n=4. Other methods included focus groups, narrative analysis of recorded group sessions and cross-sectional surveys featuring open and closed questions. Details of study characteristics are reported in Table 2.

3.2 Outcome measures

The Edinburgh Postnatal Depression Scale (EPDS) (Cox et al 1987) was the most commonly used outcome measure (n=5) and was also utilised as an inclusion/exclusion screening tool (n=6). The EPDS was used at various time points ranging from 4 weeks to 12 month follow-up. The other primary mental health outcome measure used was the Center for Epidemiological Studies Depression Scale CES-D (Radloff 1977). Two of the three qualitative papers used the PHQ9

(Spitzer et al 1999) as a screening measure for inclusion of mothers with maternal depression.

Secondary outcome measures are detailed in Table 2. These included measures of anxiety (State-Trait Anxiety Inventory- STAI) (Spielberger 1970), loneliness (UCLA-Loneliness scale UCLA-LS) (Russell 1996), anger (State-Trait Anger Expression Inventory STAXI) (Spielberger et al 1995), perceptions of social support (Social Provisions Scale SPS) (Cultrona & Russell 1987) and perceptions of peer support (Peer Support Evaluation Inventory PSEI) (Dennis 2003).

3.3 Mental Health Focus

Although the review was not focused a priori on a specific mental health diagnoses the majority of included studies evaluated PSIs primarily aimed at depression (n=12). Biggs et al (2015) was the only study not to focus on depression and instead was aimed at any type of mental health difficulty during the perinatal period. Therefore, the majority of evidence is specific to PSIs for depression. There is limited evidence available to support their use with other mental health conditions or psychological distress. PSIs were found to positively impact on depressive symptomatology, indicated by lowered EPDS and CES-D scores (Dennis 2003; Dennis et al 2009; Field et al 2013; Letourneau et al 2011; Letourneau et al 2015), see Table 3.

Reporting for secondary measures (e.g. anxiety, loneliness and other aspects of distress) varied, despite inclusion of these measures in protocols (Letourneau et al 2011). Field et al (2013) found some impact on anxiety, with lower scores on anxiety measures and reduced cortisol levels, albeit with a small sample. In the other studies no significant differences were found for anxiety measures, self-esteem or

loneliness, although positive trends were noted (Dennis 2003; Dennis et al 2009; Taft et al 2011).

3.4 Types of intervention

Included studies featured a range of interventions including telephone based peer support, one to one face to face support, group based interventions and adapted therapy delivered one to one. Telephone based interventions were the most common with six of thirteen studies featuring these (Biggs 2015; Dennis 2003; Dennis et al 2009; Dennis et al 2010; Letourneau et al 2011; Letourneau et al 2015). There were three examples of face to face interventions (Cust 2016; Letourneau et al 2011; Taft et al 2011), two peer support groups (Field et al 2013; Montgomery et al 2012) and two studies involving face to face delivery of an adapted therapy intervention (Atif et al 2016; Atif et al 2017).

There is some evidence for the effectiveness of telephone based peer support used in particular contexts (Table 3). The use of telephone based peer support across several studies reduced EPDS scores (Dennis 2003; Letourneau et al 2015) and appears to reduce the likelihood of PND developing at 12 weeks postpartum (Dennis 2003). Qualitative findings highlighted that telephone based PSIs were generally viewed as acceptable (Biggs et al 2015; Dennis et al 2010). Several of the studies excluded individuals with diagnoses of severe mental health problems. Although Dennis (2003) listed 'chronic depression' and 'postpartum psychosis' as exclusion criterion, generally this was not clearly defined and was instead described as 'serious mental illness', 'severe mental illness' or 'psychiatric clinical disorder' (Atif et al 2016 & 2017; Dennis 2003 & Taft et al 2011). Several studies also excluded individuals taking anti-depressant, anti-psychotic or 'prescribed'

medication (Dennis 2003; Dennis et al 2009; Dennis et al 2010 & Field et al 2013). Although this exclusion criteria was likely to be related to risk management, it does result in these conclusions not being applicable to this population of mothers experiencing severe difficulties with their mental health.

There was a dearth of evidence for the effectiveness of peer support delivered via group settings, due to the lack of research on group interventions perinatally. There was limited evidence for reduced self-reported depression and anxiety as well as lower levels of cortisol, following weekly 20-minute peer support groups, however this was with a limited sample size and was compared with a therapy group rather than a control (Field et al 2013). One study (Montgomery et al 2012) explored women's views of PPD within the context of a peer support group and identified themes of cohesiveness in shared experiences and safe space for recovery, reducing isolation and self-burden of living with the illness, see table 3.

Finally, face to face PSIs were evaluated in this review. The specifics of these interventions varied across with some based around befriending and others on delivering adapted therapy. Neither RCT found significant evidence that use of PSIs led to a reduction in depression in comparison to control groups (Letourneau et al 2011; Taft et al 2011). Evaluation based studies of face to face PSIs provided some evidence for lowered depressive symptomatology based on self-report measures (Cust 2016), however this was based on a small sample size, n=30. The remaining two studies that explored face to face interventions were qualitative and considered women's views (Atif et al 2016; Atif et al 2017), the results will be analysed in the meta-synthesis below.

3.5 Timing of intervention

The majority of included studies evaluated interventions aimed at the postnatal period. Of the thirteen papers included, eight were aimed at treating postnatal difficulties (Cust 2016; Dennis 2003; Dennis et al 2009; Dennis et al 2010; Letourneau et al 2011; Letourneau et al 2015; Jones et al 2015; Montgomery 2012), four at the entire perinatal period (Atif et al 2016; Atif et al 2017; Biggs et al 2015; Taft et al 2011) and one focused on antenatal depression (Field et al 2013). The evidence for effectiveness of PSIs is therefore mostly focused on the postnatal period. Three of the included studies based postnatally, focused on interventions preventing postnatal depression from developing further, by intervening at an early stage before high levels of depression were present (Dennis 2003; Dennis et al 2009; Dennis et al 2010). Therefore, much of the evidence for telephone based peer support is specific to early intervention in postnatal depression (Dennis 2003; Dennis et al 2009; Dennis et al 2010) or for postnatal depression (Letourneau et al 2015), rather than antenatally.

Field et al (2013) was the only antenatally targeted intervention. It provided limited evidence for the use of peer support groups in the antenatal period to treat anxiety and depression, but this was with a small sample size and compared to another therapy, not a control.

Of the interventions that covered the entire perinatal period, only Taft et al (2011) considered the effectiveness via a quantitative methodology. They found that PSI was effective in lowering depressive symptomatology, but the changes were not significant (Taft et al 2011). The remaining studies targeted at the perinatal period focused on women's experiences of interventions. This will be discussed in detail below. This review does not allow for comments to be made on the effectiveness of

PSIs aimed at the whole perinatal period as further research would be required to draw that conclusion.

3.6 Women's views of Peer Support Interventions – Qualitative Synthesis

To synthesise women's views of peer support from the included papers a qualitative synthesis was conducted using included qualitative papers n=3 (Atif et al 2016; Atif et al 2017; Montgomery et al 2012) and qualitative results from mixed methods papers n=4 (Biggs et al 2015; Cust 2016; Dennis et al 2010; Jones et al 2015). This synthesis used meta-ethnography, as guided by the work of Noblit and Hare (1988) and informed by subsequent reviews of this approach (Atkins et al 2008; Britten 2002). The first stage involved reading studies and identifying key themes and concepts that occurred throughout, then exploring the relationships between these concepts throughout the studies, exploring where reoccurring themes were present. Throughout this process, language used in the original papers was used to attempt to echo the concepts in the original studies. A table was utilised in this review and Schutz's notions of first, second and third order concepts were followed. In reality, it was difficult to obtain first order constructs from mixed method papers as often quotes weren't included and even where they were in the qualitative papers they were selected by researchers, so could be argued to be secondary. This difficulty was also highlighted by Atkins et al (2008). The next stage of the meta-ethnography method involved translating the studies into one another. In comparing the key concepts, the studies included in this review were judged to have enough similarity to be reciprocal and to be synthesised together to form a line of argument. An index paper was selected (Atif et al 2017) and then compared to the next paper, then the themes selected from these were compared to the next paper and this continued to allow synthesis to occur and a line of argument to be developed (Atkins et al 2008).

The four themes this produced were: peers are viewed as positive and an accepted deliverer of interventions, the shared experience of motherhood promotes opening-up, peer interactions produced learning and sharing of advice and peer interactions resulted in acceptance and of feeling safe (See Figure 2). The key themes are detailed in table 1 below along with quotes from the papers to highlight them.

Figure 2 – Themes from Meta-Synthesis

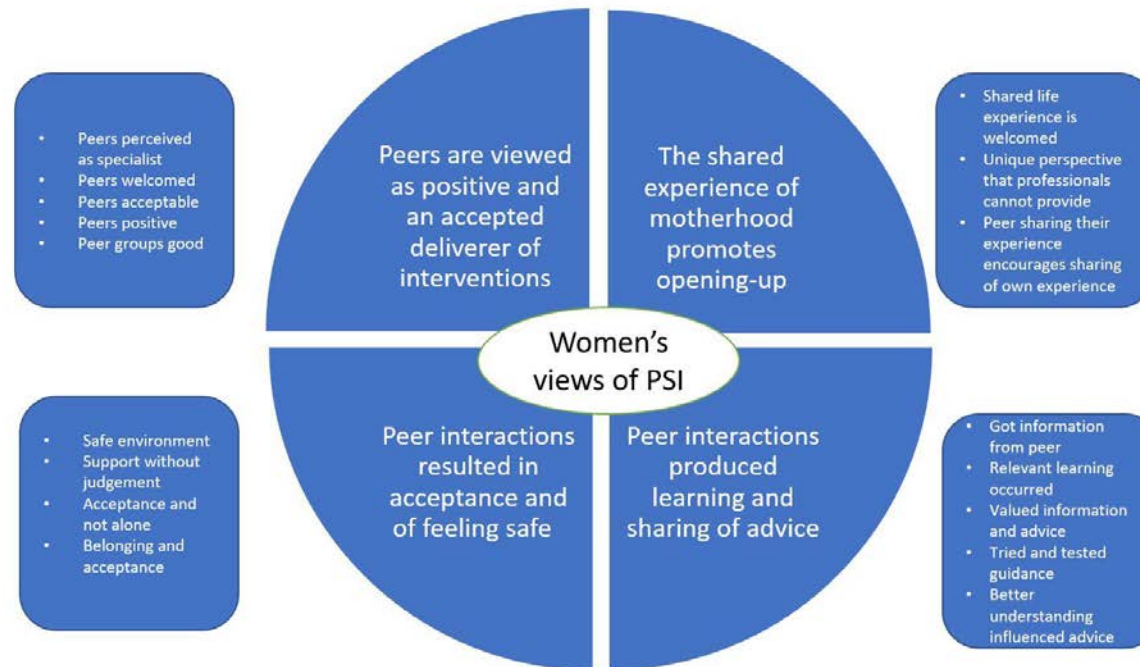


Table 1 Key Themes from Qualitative Synthesis along with indicative quotes

Key theme	Supporting quotes and corresponding paper
<p>Peers viewed as positive and an accepted deliverer of interventions</p>	<p><i>'it (the peer group) was good (Montgomery 2012)'</i></p> <p><i>'it gave me the opportunity to offload myself (Atif 2016)</i></p> <p><i>'sometimes it's nice to see other women because I get to see myself you know (Montgomery 2012).</i></p> <p><i>'we seemed to hit it off, she treated me like she knew me as a friend (Dennis et al 2010)</i></p> <p><i>'having volunteers that have experience themselves (Biggs et al 2015).</i></p>
<p>Shared experience of motherhood promotes opening up</p>	<p><i>'only a mother who has gone through similar problems, can understand how another mother is feeling' (Atif et al 2016)'</i></p> <p><i>'she had shared her experience of motherhood with me and difficulties that she faced when her child was small and then she asked me about my experience in pregnancy. So I feel like sharing my experience with her when she shares her experience of motherhood' (Atif et al 2017)</i></p>

	<p><i>'it was good that she was a mother. If she would not have been a mother she would have struggled to empathise with me. A woman who is a mother.....She can explain things very well and we can openly talk (Atif et al 2017).</i></p> <p><i>'experiencing the same thing', 'know what I know' 'clicking on a different level' (Montgomery et al 2012)</i></p> <p><i>'I find it was better to have someone who has gone through it to talk to/it's more helpful to talk to somebody with the knowledge /who actually does have a child/verses someone with a lot of knowledge who doesn't have the experience with it/it's not that they don't listen/it's just that they don't understand (Montgomery 2012).</i></p> <p><i>'it was fantastic to talk to someone who had been through PND. It makes a difference to know they understand how you are feeling (Biggs et al 2015)'</i></p>
<p>Peer interactions produced learning and sharing of advice</p>	<p><i>'I am learning new things every day, which are beneficial for me.....she used to give me good information (Atif et all 2017)'</i></p> <p><i>'my peer provided me with local information that became</i></p>

	<p><i>extremely valuable during a difficult time (Dennis et al 2010).</i></p> <p><i>'them a bit of advice' 'tried-and-true'. (Montgomery et al 2012)</i></p> <p><i>'tried and tested' PSW as 'expert' (Cust 2016)</i></p> <p><i>'help with understanding my feelings & emotions. Understanding' (Biggs et al 2015).</i></p>
<p>Peer interactions resulted in acceptance and of feeling safe</p>	<p><i>'belonging and acceptance' 'relate to you' (not) 'put up a front' 'it just kinda normalises things' (Montgomery et al 2012)</i></p> <p><i>'I was heard. I felt understood. I felt my experience was validated. That I wasn't alone that my experience wasn't so odd or so unique that it couldn't be helped or that it was all my fault' (Biggs et al 2015)</i></p> <p><i>'understanding and a freedom to talk about feelings that are very personal without any judgement' (Biggs et al 2015).</i></p> <p><i>'it's good to know that I'm not alone' Dennis et al (2010)</i></p>

3.6.1 Peers viewed as positive and an accepted deliverer of interventions

Throughout the included studies women described the use of peers to deliver interventions positively (Atif et al 2016; Atif et al 2017). Peers were viewed as acceptable, interventions viewed positively and described as specialised (Biggs et al 2015). There was a consensus that participants were satisfied with the use of peer interventions, although this emerged from the researcher's analysis and was not always detailed in first order constructs (Atif et al 2017; Biggs et al 2015; Cust 2016; Dennis et al 2010).

3.6.2 Shared experience of motherhood promotes opening up

Women repeatedly discussed the importance of peers shared experience of motherhood and difficulties with their mental health (Atif et al 2016; Atif et al 2017; Biggs et al 2015; Montgomery et al 2012). In describing their experiences of peer interventions, they often highlighted their shared experiences as key to their ability to engage in the intervention (Atif et al 2017). There was a sense that this gave a unique perspective and understanding that could not be provided by those who had not undergone similar experiences (Montgomery et al 2012).

3.6.3 Peer interactions produced learning and sharing of advice

Woman discussed learning, gaining advice and relevant/important information throughout the studies (Atif et al 2017; Dennis et al 2010; Montgomery et al 2012). There was a sense that peer involvement gave opportunities to learn valued information (Cust 2016; Montgomery et al 2012). Advice from peers was viewed as

trusted and more valid, as it was perceived that it had been tested out and came from people who understood.

3.6.4 Peer interactions resulted in acceptance and of feeling safe

A sense of women feeling safe and accepted was conveyed in many of the accounts of peer interventions. This could be perceived as a safe environment created by peers where interventions were face to face, or that women felt safe and not judged during interactions (Biggs et al 2015; Cust 2016; Dennis et al 2010; Montgomery et al 2012). Acceptance was repeatedly highlighted as important, and there was also an underlying sense of safety and belonging (Montgomery et al 2012). Delivery by peers had a normalising affect and many of the studies summarised that women realised they were not alone when interacting with peers (Biggs et al 2015; Cust 2016; Dennis et al 2010).

3.7 Study Quality

Study quality assessments are displayed in tables 4 and 5.

Although an overall quality score can be calculated using the MMAT, scores were not calculated in this review. This was decided as each area assessed is not equally weighted in importance to overall quality and therefore numerical scores do not provide an accurate overview of study quality, additionally the amendments made to the MMAT could invalidate the scoring method. Quality ratings of papers were collated based on the proportion of studies that met each criterion fully or partially. This allowed for an evaluation of studies weaknesses and strengths. All

included studies had clear research questions and data that allowed those questions to be asked, except Jones et al (2015) who only partially fulfilled this criteria.

3.8 RCT and other Quantitative designs

All included studies (n=6) reported attempts to minimise risks of selection bias in their sampling and recruitment processes. However, there were issues in this area with only 50% (n=3) meeting this criteria fully. The remaining 50% (n=3) made some attempt to minimise this bias, but did not fully mitigate issues in this area. Taft et al (2013) relied on clinicians to select possible participants, which could have led to a selection bias where clinicians influenced who participated based on their own biases and views, rather than participants being fully representative of the population. However, the clinicians involved were provided with training to enhance their understanding of who should be recruited and this may have partly resolved this issue. Letourneau et al (2011) did not appear to report clear exclusion criteria, nor was their actual recruitment process fully described. Therefore, it was unclear if their sample was representative of the overall population. Field et al (2013) did not clearly outline their recruitment strategy, again resulting in difficulties assessing their attempts to reduce selection bias. Recruitment took place via a university medical centre, which limits their sample to only those who access the particular medical centre and depending on the areas this is situated within, this could result in a bias towards particular socio-economic status or other demographic factors. Information about the randomisation processes used was inconsistent. Several RCT papers, 40%, (n=2) did not detail how randomisation was conducted or did not provide enough information to make this clear (Field et al 2013; Taft et al 2011). All studies, except Field et al (2013) made use of blinding. All studies utilised validated and reliable outcome measures.

In both Dennis et al studies adequate outcome data was provided (Dennis 2003; Dennis et al 2009), however in the other studies this was inconsistent with details either not reported (Field et al 2013), adequate for some outcomes, but not all (Letourneau et al 2011) and outcome data below 80% (Taft et al 2011). Similarly, withdrawal levels were also varied, only Dennis et al (2003) and Field et al (2013) had levels clearly below 20%. For the remaining 60% (n=3) of studies information about withdrawal was not reported (Dennis et al 2009; Letourneau et al 2011; Taft et al 2011). Most studies included appropriate analysis of the data, 60% (n=3), with power calculations detailed and commented upon (Dennis et al 2009; Letourneau et al 2011; Taft et al 2011). Dennis et al (2003) did not include a power calculation, although did make reference to the study being underpowered. Field et al (2013) did not report results for all the outcomes measured, failing to include STAXI results, although effect sizes were reported. There was also no analysis directly comparing the groups making it difficult to draw comparisons with other studies.

One quantitative paper was rated using the descriptive quantitative MMAT criterion, due to its lack of control group (Letourneau et al 2015). Although Letourneau et al (2015) had a clearly detailed sample strategy relevant to addressing their research question, there were sources of bias that could impact on how representative the sample was. Recruitment took place via screening of individuals who accessed a health helpline, this could have resulted in only recruiting individuals who seek help in some form, rather than any woman who met the inclusion and exclusion criteria. Whilst utilising appropriate standardised measures, there were issues with the response rate and analysis conducted. It appeared that the response rate is only at 53%, which was lower than acceptable and impacted on the conclusions that drawn from these results. The analysis conducted was adjusted to reflect a lower sample size, however no power calculation was reported.

3.9 Mixed methods

The quality of the four mixed method studies was more limited than the qualitative studies. Less consideration was given to key components of qualitative research, such as impact of context on research, and researchers influence on data collection/analysis. Only 50% (n=2) of studies considered the context and only at a limited level (Biggs et al 2015; Jones et al 2015). The remaining 50% (n=2) did not discuss context at all (Cust 2016; Dennis et al 2010). Although several of these studies may not be seen as conducting traditionally qualitative research they have been assessed as mixed methods due to conducting qualitative analysis of their data (Biggs et al 2015; Dennis et al 2010; Jones et al 2015). This was deemed appropriate by the first and second authors. Therefore, the context should at least be reported and considered in terms of how it impacts on the findings. None of the studies considered the influence of the researcher on the data collection or results, this is a key component of qualitative research that is missed out and is therefore a relatively important issue with the results. In terms of the qualitative part of the studies there are issues with sampling and possible selection bias for 50% (n=2) of included studies with no information provided about inclusion or exclusion criteria or details about those who opted not to participate (Cust 2016) and no details provided about sampling strategy (Jones et al 2015).

Response rates were either below acceptable levels (Biggs et al 2015) or were not reported (Cust 2016; Jones et al 2015). Jones et al (2015) did not conduct appropriate analysis of their quantitative data with little detail provided about analysis conducted, statistical analysis not reported and no effect sizes or power calculations included (Jones et al 2015). Cust (2016) also did not report effect sizes or power calculations and conducted statistical analysis that was then not reported.

Generally, the selection of a mixed methods design for any of the included studies was not fully considered. Jones et al (2015) did not provide enough detail about the design of the study to assess if the use of a mixed methods design was relevant and the remaining 75% of studies (n=3) only partially addressed this. Attempts were made to integrate the results in an appropriate way, however this integration and its possible implications on the results was not discussed in any paper (Biggs et al 2015; Cust 2016; Dennis et al 2010; Jones et al 2015). Finally, no consideration was given to the limitations of integrating data with none of the papers discussing this (Biggs et al 2015; Cust 2016; Dennis et al 2010; Jones et al 2015). In summary, there are a number of quality-based limitations in the included mixed method studies, particularly relating to their consideration of mixed method design and key aspects of qualitative research such as context and impact of researcher.

3.10 Qualitative

All included qualitative studies (n=3) had sources of data partially relevant to addressing the research question. In all cases information about reasons for not participating was not included and details such as why participants were recruited were not fully explained, i.e. Atif et al (2016) did not detail why participants were recruited whilst in the 3rd trimester of pregnancy (Atif et al 2016). Montgomery et al (2012) did not have a clear inclusion/exclusion criteria therefore making it difficult to comment on whether or not selection bias could have occurred. All three studies conducted appropriate analysis for the collected data. In both Atif et al studies context was considered, with interesting discussion included about the implication of socio-economic, geographical and cultural factors on results and possible limitations this may cause (Atif et al 2016; Atif et al 2017). Montgomery et al (2012) did not consider the impact of context on their results or the influence of the researchers on

analysis, data collection or interaction with participants, this is a major flaw of this study. Atif et al (2017) also did not consider the impact of researchers on data collection or analysis, which is unfortunate given the overall quality of the study. Atif et al (2016) makes some attempt to consider this, by highlighting processes in place to ensure reflexivity, but not exploring the possible impact of this (Atif et al 2016).

Table 2 Characteristics of Included Studies

Authors and year (country if specified)	Methodology	Sample characteristics and sample size	Peer Support Intervention	Intervention deliverers	Main mental health outcome	Mental health measures and timing of assessment	Non-mental health measures/ways of collating information
Quantitative Studies							
Dennis et al (2003) Canada	Pilot RCT	n=42 mothers at high risk of PPD screened by EPDS score. 8-12 weeks postpartum (n=20 experimental, n=22 control). 80% in intervention and 73% in control group aged 25-34	Telephone based peer support aimed at preventing development of Postpartum depression in those at high risk of developing Manual based and training provided	Mothers with self-reported history of and recovery from postpartum depression	Depression (Postnatal)	EPDS at 4 weeks and 8 weeks	SES CCSC UCLA-LS PSEI Recording of peer-volunteer activities (Peer Volunteer Activity Logs)
Dennis et al (2009)	Multi-site RCT	n=701 (349 intervention, control=352)	Telephone based peer support aimed at	Mothers with self-reported history of and recovery from	Depression (Postnatal)	EPDS at 2 weeks postpartum then repeated at	UCLA-LS STAI

Canada		mothers within first 2 weeks post-partum high risk for PPD screened via EPDS (scores >9) and SCID 78% in both groups aged 20-34	preventing development of Postpartum depression in those at high risk of developing Manual based and training provided	postpartum depression		12 weeks , follow-up at 24 weeks Structured clinical interview for depression State-trait Anxiety	Health service utilisation and cost of care questionnaires Activity logs
Field et al (2013) USA	Comparison of groups	n-= 44, 22 per group (3 consecutive groups) prenatally depressed mothers- assessed via SCID Mean age 24.9 years	20 minute peer support group over 12 weeks, compared to IPT group	Groups were led by group members – prenatally depressed mothers	Depression (Prenatal)	CES-D Measures at before and after groups	STAXI STAI Cortisol levels in saliva
Letourneau et al (2011) Canada	RCT	n=60 (n=27 intervention, n=33 control) Mothers with PPD - EPDS	Peer support via home visits and telephone calls over 12	Mothers from the community recovered from PPD for	Depression (Postnatal)	EPDS at baseline, 6 and 12 weeks	NCAST MDI ICQ

		scores >12. Caring for infant less than 9 months old. Most mothers aged between 25-36 years	weeks – based on peer support manual and including focus on mother-infant interactions	at least 2 years			SPS Salivary cortisol levels
Letourneau et al (2015) Canada	Quasi experimental – pre/post no control group	n=64 mothers depressed up to 24 months postnatally. EPDS score 12-19 mean age 26.3 years	Telephone based peer support 12 weekly support calls Training and manual based	Mothers recovered from PPD (EPDS scores<6)	Depression (Postnatal)	EPDS at intake, midpoint (7.43 weeks) and end of intervention (13.9 weeks)	SPS Subscales from SPS – reassurance of self-worth and guidance Peer support questionnaires
Taft et al (2011) Australia	Cluster RCT	n=133 (n=90 intervention, 43 comparison) Mothers pregnant or one child under 5 years old IPV or psychosocially distressed as assessed by referring clinician	Non-professional befriending, advocacy and parenting support. Weekly visits over 12 months	Mothers who had good listening skills, open compassionate and non-judgemental	Low mood/depression (Perinatal)	EPDS >13 At baseline and 12 month follow up	CAS SF-36 PSI-SF MOS-SF

		mean age 32 years					
Mixed Method Studies							
Biggs et al (2015) Australia	Cross sectional survey – evaluating service	n=124 (30% response rate from 405 callers) 97% mothers with difficulties with their mental health perinatally 69.9% of callers 30-40 years	Telephone based peer support and counselling service	Mothers who had experienced mental illness or person who supported someone through it 40, along with 12 professional counsellors	Mental health difficulties – not specified diagnosis (Perinatal)	None	Survey from previous evaluation of service – included likert scale questions and open questions
Cust (2016) UK	Questionnaire and Interviews	N=30, mothers with PND scored using EPDS and clinical assessment	One to one support from peer support worker aimed at reducing PND	Mothers who previously suffered mild-moderate PND but currently have no treatment	Depression (Postnatal)	EPDS as screening then 6 weeks postnatal, 12 weeks follow up and 6 month follow up	Interviews
Dennis et al (2010) Same cohort as RCT	Cross sectional questionnaire	N=221 response rate 63.6% mothers within first 2 weeks post-partum	Telephone based peer support aimed at preventing	Mothers with self-reported history of and recovery from postpartum	Depression (Postnatal)	EPDS (screening)	PSEI Open-ended questions (analysed)

Dennis 2009 Canada		high risk for PPD mean age 30.9 years	development of PPD in those at high risk of developing	depression			qualitatively)
Jones (2015) UK	Evaluation of scheme	N=20 Women with low mood following childbirth	Befriending conducted by peer volunteers	Parents with experience of depression	Low mood (Postnatal)	None	Information collated during home visits – method not clear
Qualitative studies							
Atif et al (2016) India and Pakistan Same cohort as below	Qualitative study to explore barriers/facilitat ors to acceptability of peer volunteers	N=21 Depressed mothers in 2 nd /3 rd trimester or of infant up to 4 months old Screened using PHQ-9 Mean age 28 years	CBT based programme (THP) delivered by volunteers aimed at reducing perinatal depression	Mothers with shared life experiences and socio- demographic characteristic s and desirable personal characteristic s	Depression (Perinatal)	PHQ-9 (score>10)	Focus groups and interviews
Atif et al (2017) India and Pakistan	Adaptability and feasibility evaluation – qualitative via focus groups and interviews	n=60 Depressed mothers in 2 nd /3 rd trimester or of infant up to 4 months old Screened using	CBT based programme (THP) delivered by volunteers aimed at	Mothers with shared life experiences and socio- demographic characteristic	Depression (Perinatal)	PHQ-9 (score>10) Over 6 months of intervention	Focus groups and interviews

		PHQ-9	reducing perinatal depression	s and desirable personal characteristics		delivery	
Montgomery et al (2012) Canada	Peer support groups recorded and analysed using focused ethnography	n=7 women experiencing PPD	Weekly Peer support groups facilitated by peer support leader and using peer support meeting guide – 5 weeks	Mothers with history of PPD	Depression	None used	Recordings of group, diaries and interviews

Notes: EPDS: Edinburgh Postnatal Depression Scale, SES: Rosenberg Self-esteem Scale, CCSC: Child-Care Stress Checklist, UCLA-LS: UCLA Loneliness Scale (short version), PSEI: Peer Support Evaluation Inventory, STAI: State-Trait Anxiety Inventory, STAXI: State-Trait Anger Inventory, CES-D: The Center for Epidemiological Studies Depression Scale, SCID: Structured Clinical Interview for Depression, NCAST: Nursing Child Assessment Satellite Training, MDI: Bayley Mental Development Index, ICQ: Infant Characteristics Questionnaire, SPS: Social Provisions Scale, CAS: Composite Abuse Scale, SF-36: Short-Form Health Survey, PSI-SF: Parenting Stress Index Short Form, MOS-SF: Medical Outcomes Scale Short Form and PHQ-9: Patient Health Questionnaire

Table 3 Key findings from Included Studies

Authors and year (country if specified)	Key findings
Quantitative	
Dennis et al (2003) Canada	Significantly more mothers had decreased depressive symptomatology at 4 and 8 weeks. Significant differences between EPDS scores at 4 and 8 weeks. (effects remained when age/education/income controlled for) PSI significantly decreased depressive symptomatology at 8 weeks Number of peer volunteer contacts was not significantly related to depressive symptomatology at 4 or 8 weeks Most women very satisfied with peer support
Dennis et al (2009) Canada	Women in intervention group significantly less likely to have PND symptoms at 12 weeks Peer support resulted in half the risk of developing PND at 12 weeks, no significant difference at 24 weeks Less anxiety experienced by those in the peer support group at 12 weeks, not maintained at 24 weeks Women satisfied with PSI experience Peer volunteer interactions at 12 weeks correlated to total number of peer contacts and conversations
Field et al (2013)	Both groups experienced decreased depression, anxiety and lower cortisol levels after groups. Greater decrease in cortisol levels for peer group
Letourneau et al (2011) Canada	No significant difference in maternal feeding interactions, but there was in feeding interactions favouring control group EPDS scores improved in both groups over time, significant time effect, control group favoured Time effect for SPS, control group favoured
Taft et al (2011)	Differences in EPDS scores lower in intervention group – but not significant Weak evidence for wellbeing improvements in intervention group at follow up Parenting stress was not impacted on by intervention
Quantitative Non-RCT	
Letourneau et al (2015) Canada	Significant decreases in depression at midpoint and final rating 91.9% not depressed or improved at midpoint Mean social support provisions improved from intake (mean =70.73) to end (mean=76.69) Mothers satisfied with peer support (93.9%) Greater social support related to lower depression symptoms at end of intervention Increase in social support over time

Mixed methods	
Biggs et al (2015) Australia	<p>Callers reported positive contact with service</p> <p>Most agreed that their concerns were understood and felt helped by the service</p> <p>Most reported feeling better emotionally following contact</p> <p>Most reported it had provided non-judgemental contact</p> <p>Mixed response on whether it was helpful having volunteer with personal experience</p> <p>Qualitative analysis highlighted peer experience as a point of difference of the service compared to other support</p> <p>Global theme: 'safe space to receive judgement without support. Other themes: 'accessible and specialised' and 'feeling heard and understood' – 10 subthemes</p>
Cust (2016) UK	<p>Difference in mean EPDS scores at 12 weeks and at 6 months follow up, lower in intervention group (not clear if significant)</p> <p>Qualitative results:</p> <p>Key themes: 'social support', 'empathy' and 'shared experience'</p> <p>Also highlighted: 'truly relate to PSW', 'hope, 'feel not a failure', 'sense of normality', 'be a good mother, PSW 'as expert', 'had survived' and (advice was) 'tried and tested'.</p> <p>Other themes: 'Recognition of own changing perspective' and 'time and support required'</p>
Dennis et al (2010) (Same cohort as Dennis 2009 RCT) Canada	<p>Majority of mothers perceived peer support experience positively</p> <p>Mothers perceived that they were provided with emotional, informational and appraisal support</p> <p>Mothers reported high levels of positive relationship qualities (trust) and perceived acceptance</p> <p>Maternal satisfaction associated with number and duration of peer contacts</p> <p>Themes: informational support, relationship qualities (trust, acceptance & likeability), benefits of peer support, satisfaction with experiences, did not need service as not depressed, need for matching peers, need for accessible peers</p> <p>Expanded training in appraisal would enhance support that peers could provide</p> <p>Careful attention of matching volunteers to participants could facilitate supportive relationships</p>
Jones (2015) UK	<p>Proportion of women managed to find suitable volunteer in time frame</p> <p>No relationship between length of time spent with volunteer and reported improvement</p> <p>No relationship between length of time taken to be matched with volunteer and reported improvement</p> <p>Scheme is affective in supporting women with wellbeing and daily functioning and has positive impact on some women</p>

Qualitative	
Atif et al (2016) India and Pakistan Same cohort as below	Majority of mothers found intervention beneficial, good receptivity, positive Facilitators – high level of need, desirable peer volunteer characteristics, intervention perceived as positive Barriers- societal and cultural barriers, lack of engagement of mothers Qualities such as personal characteristics (empathy and trustworthiness), being local and linked to health system effected perception of intervention
Atif et al (2017) India and Pakistan	Most mothers viewed intervention as acceptable/useful/relevant to their needs Viewed peers as effective delivery agents with good understanding, receptive to their problems, sensitive to family dynamics and easy to relate to Felt comfortable discussing issues knowing peers had gone through similar life experiences Shared experiences facilitate intervention delivery Mothers reported information was provided in effective and helpful way Mothers had concerns about confidentiality/stigma
Montgomery et al (2012)	Recovery stories identified via data, these formed 3 groupings: 'illness', 'mothering wisdom' and 'mobilising' Cohesiveness in shared experiences created safe space for recovery Diminishes isolation and self-burden of living with illness Heightened sense of self-understanding Women actively sought and established space for recovery from PPD Culture of mutual aid (in group)

Notes: EPDS: Edinburgh Postnatal Depression Scale, PSI: Peer Support Intervention and SPS: Social Provision Scale

Table 4 Quality Assessment for Qualitative and Quantitative Studies

Author and year	Clear research questions or objectives	Data collected addresses research question	Recruitment minimises selection bias	Clear description of randomisation	Clear description of concealment/blinding	Appropriate measures used	Complete outcome data	Low withdrawal/drop out	Appropriate analysis	Follow up
Quantitative RCT										
Dennis (2003)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Partial	No
Dennis (2009)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Can't tell	Yes	Partial
Field (2013)	Yes	Yes	Partial	No	No	Yes	Can't tell	Yes	Partial	No
Letourneau (2011)	Yes	Yes	Partial	Partial	Yes	Yes	Partial	Can't tell	Yes	No
Taft (2011)	Yes	Yes	Partial	Can't tell	Partial	Partial	No	Can't tell	Yes	Yes
Quantitative – non RCT										
Author and year	Clear research questions or objectives	Data collected addresses research question	Sampling strategy relevant to research question	Sample is representative	Appropriate measures used	Acceptable response rate	Appropriate analysis			
Letourneau (2015)	Yes	Yes	Yes	Partial	Yes	No	Partial			

Qualitative

Author and year	Clear research questions or objectives	Data collected addresses research question	Sources of qualitative data relevant to address question	Process for analysing qualitative data relevant	Appropriate consideration given to context	Appropriate consideration given to researchers influence
Atif (2016)	Yes	Yes	Partial	Yes	Yes	Partial
Atif (2017)	Yes	Yes	Partial	Yes	Yes	No
Montgomery (2012)	Yes	Yes	Partial	Yes	No	No

Table 5 Quality Assessment for Mixed Method Designs

Author and year	Clear research questions or objectives	Data collected addresses research question	Sources of qualitative data relevant to address question	Process for analysing qualitative data relevant	Appropriate consideration given to context	Appropriate consideration given to researchers influence	Sampling strategy relevant to research question	Sample is representative	Appropriate measures used	Acceptable response rate	Analysis appropriate	Mixed methods design is appropriate	Integration of qualitative and quantitative relevant	Consideration given to limits of integration
Biggs (2015)	Yes	Yes	Partial	Partial	Partial	No	Partial	Partial	Partial	No	Yes	Partial	Partial	No
Cust (2016)	Yes	Yes	Partial	Partial	No	No	No	Can't tell	Yes	Can't tell	Partial	Partial	Partial	No
Jones (2015)	Partial	Partial	Can't tell	Can't tell	Partial	No	Can't tell	Can't tell	N/A	Can't tell	Can't tell	Can't tell	Partial	No
Dennis ¹ (2010)	Yes	Yes	Yes	Partial	No	No	-	-	-	-	Yes	Partial	Partial	Partial

1 – part of same cohort as Dennis (2009) therefore RCT element already quality assessed as part of RCT quality assessment in table 4 – and only qualitative/mixed method aspects rated here (see table – and Dennis 2009 for quality assessment of quantitative part)

4. Discussion

The results of this review provide some promising evidence for the effectiveness of perinatal PSIs for mental health difficulties. However, results are limited to specific types of intervention and at particular time points. The mixed methods approach builds on previous reviews by enabling appraisal of the effectiveness of interventions whilst simultaneously considering women's views. Peer support, telephone-based interventions are the most promising, with evidence of postnatal reductions in depressive symptomatology (Letourneau et al 2015), particularly in the context of early intervention with evidence that it can prevent further development of depression (Dennis 2003; Dennis et al 2009). Furthermore, telephone based PSIs may be specifically effective for PPD, as no significant changes were found for change on anxiety measures. Telephone based interventions may be acceptable to mothers partly due to their flexibility in comparison to attending appointments traditional health care systems and this may result in more effective engagement. The research conducted evaluating telephone based PSIs was generally more rigorous, and of higher quality, than that evaluating face to face or group interventions, resulting in more promising evidence for this method of delivery.

Evidence for other types of intervention are mixed. There is limited evidence for peer support groups being associated with lower levels of anxiety and depression post intervention (Field et al 2013), but methodological issues limit conclusions about effectiveness. Finally, there is little evidence, to date, for the effectiveness of face-to-face interventions with RCTs showing no significant differences between intervention and controls (Letourneau et al 2011; Taft et al 2011). One pilot study Cust (2016) showed some evidence for a reduction in depression symptoms postnatally, as detailed previously this study had methodological issues which resulted in difficulties drawing strong conclusions from their findings. However,

qualitative results suggest that women find face to face interventions highly acceptable. Despite this acceptability there is less evidence for the effectiveness of such approaches, partly because of methodological issues and less research evaluating such approaches. Women's views of such approaches, as highlighted by the themes from the meta-synthesis, underline the importance of more research on the effectiveness of these interventions to balance acceptability with effectiveness.

There was considerable methodological heterogeneity, in terms of interventions, delivery and the time points at which they are targeted during the perinatal period, this leads to replications difficulties, and isolated evaluations of PSIs, echoing previous work (Leger & Letourneau et al 2015). Despite the evidence for effectiveness of telephone based PSIs, methodological issues make it difficult to identify specific ingredients of this approach. It could be one of many factors e.g. method of delivery, telephone based, targeting of PSIs at PPD or the use of standardised manuals and training to support PSI delivery (Dennis 2003; Dennis et al 2009), or a combination of all three factors. This difficulty highlights the need for further mechanisms and dismantling studies of perinatal PSIs.

The key themes identified from the meta-synthesis around acceptance, feeling safe and learning and sharing of advice are consistent with themes from a previous review of validation, isolation and finding a way forward (Jones et al 2014). However, the current review also identified the importance of shared experience in promoting opening up and talking about feelings, with many women reflecting that knowing peers have shared experience encouraged them to talk about their own experiences (Atif et al 2016). This theme supports the notion of a protective effect of access to supports with similar experiences, and conversely the lack of access increasing risk of developing PPD (Brugha et al 1998). Overall, the themes highlighted by women's views emphasise the unique role of PSIs in supporting

women in this period and the key aspects that women value from these interventions, emphasising PSIs acceptability. The acceptability of PSIs was also highlighted in the quantitative aspects of mixed method papers with, women consistently agreeing with statements relating to this (Biggs et al 2016; Dennis et al 2010).

Most research on PSIs remains focused on postnatal difficulties and predominately on depression. Therefore, the review cannot draw conclusions about the impact of PSIs on a wider variety of mental health difficulties or antenatally. There also remains a need for research to be conducted to explore PSIs in the antenatal period. For many of the studies included in this review, diagnosis of a 'psychiatric clinical disorder', 'serious mental illness' or 'history of chronic depression' were listed as reasons for exclusion from the trial (Dennis 2003; Taft et al 2011). Although this is likely to be related to levels of risk and could be a confounding factor in studies with an early intervention focus, generally this results in less opportunities for evidence concerning these interventions for more long standing or complex difficulties. That said, a recent meta-analysis (Lloyd-Evans et al 2014) in adult mental health concluded that there is little evidence for PSIs as a treatment for serious mental illness and wide heterogeneity in approach and evaluation. The same review did highlight evidence for peer support being associated with positive effects on recovery, hope and empowerment which could relate to qualitative themes identified in this review and high levels of acceptability of PSI. Given that social isolation is noted as a key factor in the development of PPD (Dennis 2003) exploring the use of perinatal PSIs with a wider range of disorders and severity of disorder/levels of distress would still be worthwhile to establish if meeting the need for social support through peer support is beneficial.

Despite evidence for the effectiveness of PSIs, the mechanisms for effectiveness and how to maintain fidelity to the prescribed PSI model remain unclear. It is notable how varied the training and follow up, or supervision, volunteers are provided with. Training provided for peers ranged from 4 hour sessions (Dennis 2003; Dennis et al 2009) to 40 hours of training (Jones et al 2015). The focus of training often varied and at times wasn't reported. Several PSIs utilised a handbook or manual to support peers after training (Dennis 2003; Dennis et al 2009; Letourneau et al 2011; Letourneau et al 2015), some provided follow-up support for peers via volunteer coordinators, but it wasn't clear what this consisted of (Biggs et al 2015; Dennis 2003; Dennis et al 2009), whilst others noted follow up support that wasn't specified (Letourneau et al 2011; Taft et al 2011). Only Atif et al (2016 & 2017) described any regular formal supervision of peers, however the PSI focused on the delivery of adapted psychological therapy, where supervision is commonplace and a requirement. The lack of supervision of peers throughout the majority of the papers included does highlight the difficulty in maintaining fidelity to the type of intervention aimed at being provided. Although peers were often asked to complete log books reflecting their input, this often appeared to be used for analysis of activity levels, rather than considering the content of their support (Cust 2016; Dennis et al 2003; Dennis et al 2009). In future when trying to understand more about the mechanisms by which peer support works and providing evidence for effectiveness of particular PSIs how to maintain fidelity to a standardised approach should be considered, whether this be via supervision or other methods.

Qualitative themes from this review, although not providing direct evidence for underlying mechanisms of PSIs, do allow for an understanding of what the women utilising such interventions highlight as the benefits of this approach and could be explored further as part of future research on underlying mechanisms.

The findings around effectiveness relating to postnatal depression and peer support appear to fit with the wider evidence base for the use of PSIs in treating mental ill health. Pfeiffer et al (2011) conducted a meta-analysis that provided evidence for the effectiveness of PSIs for treating depression. This was not specific to perinatal mental health, but highlighted the impact of such support on treating depression finding effect sizes comparable with psychotherapy for depression (Pfeiffer et al 2011). The results from this review suggest that peer support could be effective for postnatal depression and builds on the evidence in this meta-analysis (Pfeiffer et al 2011). In addition, there is evidence for the effectiveness of PSIs within other areas of maternal health provision, such as breastfeeding support initiatives (Jolly et al 2012).

4.1 Limitations of papers

As highlighted when reviewing quality of the included papers there are methodological issues with the literature in this area and particularly with mixed method research papers. There are variations in when outcome measures are applied and often a lack of follow-up, so it is not clear if effects are maintained. As detailed in the quality assessment there are issues with recruitment strategies in place with lack of clear inclusion/exclusion criterion in place at times and selection biases brought on by recruiting via particular health telephone lines or (Letourneau et al 2015) or from one source, such as a particular medical centre (Field et al 2013). Often little information was provided about why individuals dropped out or chose not to participate in studies reported (Dennis et al 2009; Letourneau et al 2011; Taft et al 2011). Understanding why women chose not to participate, or drop out, could provide information about barriers to engaging in peer support or allow an understanding of when PSIs may not be acceptable/appropriate. Future research would benefit from attempting to collate this information. At times there was a lack of

information about the PSI intervention itself and what it actually involved, this makes it difficult to extrapolate what the possible underlying mechanisms of peer support may be, or what is particularly beneficial, or not, about that intervention (Jones et al 2015).

In mixed method papers and in several of the qualitative papers little reflection on context or the impact of researchers on the results occurred, this is a key component of qualitative research and is a weakness of some of the research conducted in this area. In addition, reasons for conducting mixed method research was not always fully considered, with Cust adding a qualitative element due to small sample size rather than an expressed need to meet a qualitative need (Cust 2016).

4.2 Issues in the wider literature

On conducting this review, it became apparent that the word peer is often used to mean a variety of types of person, at times this could be someone with one shared characteristic e.g. a mother and at other times it can simply be used interchangeably with the word volunteer or with a lay person who does not have shared life experiences and finally it can be defined as it was for this review. The use of the same word to convey many varied concepts can lead to literature becoming difficult to understand and can cause confusion for people attempting to access peer based interventions. In order to build on existing evidence for peer support it would be beneficial to be use clear definitions for peer in future research and when promoting interventions in the community.

Another difficulty in selecting studies to review and in designing inclusion/exclusion criteria is that there is also variation in the primary aims of peer support/lay support interventions currently carried out. There are a number of interventions aimed at

social risk or based on socio-economic factors, this may at times include mental health difficulties, but often individuals experiencing measurable mental health difficulties was a small proportion of the sample, individuals were experiencing a wide range of other difficulties, individuals were not recruited on the basis of their mental health and mental health intervention was not the primary focus. However, the addition of this varied literature and intervention may make it difficult to be clear about what peer support is targeting and may increase complexity when trying to understand the effectiveness of peer support. For this review, it was decided that mental health would be the main focus so as to be able to draw conclusions about peer support and mental health specifically.

4.3 Limitations of review

Only papers that were available in English were included in the review, and consequently key papers from other countries may have been missed. Ideally, papers would be translated to ensure all relevant papers were included. Also, as a result of time constraints key authors in the research field were not contacted to establish if there was any 'grey' literature that could be added to the review, this could result in unpublished literature being missed from the review.

Due to the high number of initial papers found, titles and abstracts were not all reviewed by an additional rater and instead only 10% were reviewed. A higher number of titles and abstracts being independently screened would have been preferred.

4.4 Clinical Implications

The evidence reviewed here suggests that PSIs may be effective in treating PPD, so this could have an impact on provision of services for PPD with an additional source of support that could be invested in to increase the availability of support and

treatment. This must be interpreted with caution, however as it is specific to telephone based peer support and the studies that reported such results had clear criteria for recruitment of peers, provided training and a handbook to support the intervention itself, based on previous research and proposed model of peer support (Dennis et al 2009). Therefore, any planned future interventions should ensure that similar protocols are followed to attempt to replicate the effectiveness that has been found using this approach. Although other studies had methodological issues and the interventions themselves are heterogenous, the meta-synthesis highlighted the acceptability of PSIs despite these issues and this is important for service providers to bear in mind when considering implementation. Unique aspects of PSIs were valued by women and this makes clinical consideration of such interventions important.

In addition, the findings on women's views of PSIs could be considered in relation to provision of services and health care as a whole. Where there are no available opportunities for PSIs, service providers could consider these views and whether or not they could provide similar benefits in other ways. For example, could there be ways of facilitating the sharing of advice and information from mothers who have shared experiences via service evaluations, provision of peer led information leaflets or by creating opportunities for mental health based discussions at existing antenatal classes.

4.5 Future Research Recommendations

Given that the evidence for peer support with face-to-face interactions as the mode of intervention has very mixed evidence, more rigorous trial design would be welcome e.g. RCT comparing face-to-face peer support with treatment as usual or an appropriate control. In addition to this building on the limited research exploring peer support groups and their impact on perinatal mental illness would also be

useful, future research could explore the use of group based PSI via an RCT, again with more rigour and standardisation of the group intervention and what this would entail. Group settings can allow for maximising of resources where there are constraints and often have additional social support aspects, so it would be of interest to service providers to have more information on the effectiveness of such approaches. Exploring the range of modes of PSI could provide answers as to the effectiveness of peer support in different contexts but could also provide a range of options for health and social care providers when planning support and treatment options.

As previously highlighted, there is little research that considers the use of perinatal PSI in other mental health conditions outwith depression or of PSIs during pregnancy. Another area for further research would be broadening out to explore the use of peer support with other mental health conditions and psychological distress and more focus on the antenatal period. Given the findings from this review of the women's views on peer support it seems that establishing if such interventions would be applicable to a wider range of individuals experiencing perinatal mental illness may be worthwhile. As is highlighted in Pfeiffer et al meta-analysis (2011) peer support can be a low-cost intervention that can provide an alternative to traditional mental health care (Pfeiffer et al 2011), so an economic evaluation of perinatal PSIs could inform future service developments.

4.6 Conclusion

In summary this review adds to the evidence base for use of PSIs for perinatal mental health difficulties, specific to postnatal depression, and provides an understanding of women's views of such interventions. There is promising initial evidence for the use of telephone based PSIs in treating postnatal depression and generally PSIs are acceptable to women during the perinatal period. Further

research is required to evaluate the effectiveness of peer support interventions during pregnancy, of face to face interventions and with a wider range of difficulties.

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Journal article 2: Empirical Project

‘It’s not all glowing and kale smoothies’: An exploration of mental health difficulties during pregnancy through women’s voices

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Word count: 5946 (excluding, tables, figures and appendices)

Conflicts of interest: none

Written in accordance with submission guidelines for Psychology and Psychotherapy: Theory, Research and Practice 2018 (Appendix 6)

Abstract

Objectives: This study aimed to explore the experiences of women with moderate to severe mental health difficulties during pregnancy, with a focus on establishing what psychological needs they may have. Mental health difficulties during pregnancy are common and can have serious impacts on women's lives. Perinatal mental health is a growing area of research. Despite this, less is known about women's experiences of difficulties with their mental health during pregnancy, due to a focus on postnatal experiences, views of staff and evaluation of specific treatments and services. Even less research focuses on the experiences of women with moderate to severe mental health difficulties during pregnancy.

Design: An Interpretive Phenomenological Analysis (IPA) approach was adopted as the aim of the project was to focus on women's experiences during pregnancy and making sense of experiences is key to IPA.

Methods: Eleven interviews were conducted with participants recruited via a Perinatal Mental Health Service. Interviews were transcribed and analysed as per the IPA method.

Results: Several Superordinate themes were identified: Need for acceptance, Need for awareness, Search for explanations, What helped, Emotional intensity, Societal influences and Service provision. Within these a range of emergent themes were also found.

Conclusions: These themes highlight the need for greater awareness and acceptance of mental health difficulties during pregnancy and the requirement for services to change to meet these needs, as well as the role of clinicians within this. The potential clinical and research implications of the results are discussed, as are limitations of this study.

Practitioner points

- There is a need for professionals working within maternity care and wider health services to be aware of the common nature of mental health difficulties during pregnancy and to promote this to the women they work with by having open conversations about mental health difficulties in pregnancy
- Practitioners could also play a part in promoting a more realistic portrayal of pregnancy and expectations of what pregnancy could entail whilst normalising distress occurring during pregnancy
- Practitioners can have a role in promoting wider awareness of mental health difficulties during pregnancy by considering using promotional materials (posters, leaflets etc) in maternity care/health service waiting rooms and public areas. This could be a small step in raising awareness that might begin to normalise these experiences
- Practitioners should consider the need for women to have access to a wider range of treatments and alternatives to medication during pregnancy, such as access to psychological therapies or peer support opportunities, given that most of the participants expressed concern over use of medication in pregnancy and these treatments are recommended within clinical guidelines.
- Practitioners should attempt where possible, to ensure continuity of care is achieved within maternity services allowing more opportunity for women to build trust in their clinicians and to therefore begin to feel more comfortable discussing their mental health. In addition to this where multiple services are

involved in care clear lines of communication should be established to improve women's experience of care across services.

Introduction

Experiencing mental health difficulties during pregnancy (MHDP) is common, with depression and anxiety affecting 10-15 out of every 100 women during pregnancy (Bennett, Einarson, Taddio, Koren & Einarso TR 2004; Heron, O'Connor, Evans, Golding & Glover 2004). Increased distress associated with pre-existing mental health conditions, such as OCD and eating disorders, is also common (NICE Guideline CG192 2018; SIGN Guideline 127 2012). There is a requirement for a specialised approach to treating MHDP (and postnatally) and treatment guidelines highlight the need for psychological approaches to care, as well as specific considerations to treating and recognising difficulties at this time (NICE Guideline CG192 2018). MHDP are associated with a range of suboptimal outcomes for mother and infant, including birth complications (Andersson, Sundstrom-Poromaa, Wulff, Astrom & Bixo 2004), low birth weight (Grote et al 2010), elevated postnatal mental health difficulties (Robertson, Grace, Wallington, & Stewart 2004), attachment difficulties (Carter, Garrity-Rokous, Chazan-Cohen, Little & Briggs-Gowan 2001), and childhood behavioural issues (Deave, Heron, Evans & Emond 2008). Suicide remains a leading cause of maternal death in the UK (Knight & Tuffnell 2018). The mental wellbeing of women during the perinatal period (pregnancy to 1 year postnatally) is increasingly considered within national policy with an emphasis on the importance of effective care that is person centred and meets 'individual needs' (A refreshed framework for maternity care in Scotland 2011; Early years Framework 2008; NICE Guideline CG192 2018).

Current status of research

Despite the growing emphasis on the need to recognise and treat MHDP, perinatal mental health research remains limited and focused on several key areas: postnatal difficulties (particularly postnatal depression: PND), evaluation of treatment and services, experience of parenting and long-term impact on children. There is less focus on the lived experience of women with mental health difficulties during the perinatal period and their needs (Megnin-Viggars, Symington, Howard & Pilling 2015).

Key themes emerge from the literature regarding experiences of services/treatment. These include: feeling unable to disclose their feelings, feeling that family and/or staff fail to respond to emotional/practical needs, difficulty distinguishing between normal adjustment and difficulties with mental health, and the role of internal/external stigma (Dennis & Chung-Lee 2006; Edwards & Timmons 2005). The impact of stigma is widespread with women reporting resulting isolation, changes in relationships and delays accessing treatment (Edwards & Timmons 2005). Women fear judgement by professionals, with worries that disclosing symptoms results in negative views of their ability to parent (McCauley, Elsom, Muir-Cochrane & Lyneham 2011). Focusing solely on service and treatment outcomes results in a lack of consideration of other underlying needs. Consequently, service development may neglect understanding the needs of people who access services and fail to highlight what women consider important to their wellbeing.

Research on lived experience is often focused on the postnatal period and parsed by diagnosis (e.g. PND, post-partum psychosis and PTSD) rather than gaining a

holistic understanding of wellbeing (Czarnocka & Slade 2000; Glover, Jomeen, Urquhart & Martin 2014; Leahy-Warren & McCarthy 2007; Megnin-Viggars et al 2015). There is therefore need for more research exploring women's experiences during pregnancy not focused on one diagnosis.

Often where antenatal difficulties are explored it is with reference to the postnatal impact, for instance, factors impacting on PND risk, rather than attempting to understand needs during pregnancy (Heron et al 2004). Treatment reviews of antenatal depression and of experiences of care during the perinatal period, also highlight the lack of research focusing on pregnancy (Dennis & Hodnett 2007; Megnin-Viggars et al 2015). Again, this highlights the need for more research focused on women's experiences whilst they are pregnant.

There are various positions on what factors and psychological theories may be relevant to understanding mental health in the perinatal period, including the lancet series on perinatal mental health (Howard et al 2014 & Jones et al 2014) and Moulds et al (2018) consideration of the role of repetitive negative thinking. However, there are a lack of empirically based psychological models exploring mental health antenatally. Moulds et al (2018) proposed that repetitive negative thinking could be linked to depression during the perinatal period, but cited a need for further research on its hypothesised role during pregnancy (Moulds et al 2018). Therefore, there is a need for greater understanding of women's experiences during pregnancy to support the development of such models.

Staneva, Bogossian and Wittkowski (2015) conducted a meta-synthesis of qualitative studies of anxiety, depression and psychological distress during pregnancy and identified themes from 8 studies, concluding that there is a process

of transformation towards motherhood that is specific to those experiencing psychological distress during pregnancy. The key themes they highlighted were: recognising that things are not right, dealing with stigma, negotiating the transformation, spiralling down, and regaining control (Staneva et al 2015). They also highlighted that the majority of research in pregnancy focused on bio-medical perspectives obscuring women's accounts (Staneva et al 2015). They included studies focused on mild-moderate difficulties, fear related to childbirth and impact on maternal-foetal attachment, highlighting a gap in the understanding of the needs of women experiencing moderate to severe MHDP.

Current research into moderate and severe difficulties

Much existing research on complex difficulties focuses on the long-term impact on the child and evaluation of biological treatment (Doucet, Jones, Letourneau, Dennis, & Blackmore 2011) is split by diagnostic categories and is often not focused on lived experience, although this area is beginning to develop with explorations of experiences of post-partum psychosis (Glover et al 2014; Engqvist, Ferszt, Ahlin & Nilsson 2011; Robertson & Lyons 2003).

Dolman, Jones and Howard (2013) reviewed the qualitative literature on motherhood for women with severe mental illness, identifying 23 studies, 8 of which focused on the views of health professionals with an aim of synthesising literature on experiences of motherhood for women with severe mental illness and the literature on experiences of health professional caring for mothers (Dolman et al 2013). The review highlighted two overarching themes: experiences of motherhood and experiences of services with sub-themes including: guilt, coping with dual

identities, centrality of motherhood and stigma (Dolman et al 2013). Further sub-themes included: problems with service provision, custody loss, positive aspects of service provision, isolation and concerns over effect on the child. These themes highlight the complex nature of experiencing difficulties with mental health during the perinatal period and challenges women face at this time. Again, this review highlighted the need for more research on experiences of mothers during pregnancy, with Dolman noting that none of the studies included focused specifically on pregnancy, instead the focus was postnatally based and of preconceptions of motherhood (Dolman et al 2013). Therefore, although attempts have been made to understand more about women's experiences of mental health difficulties these continue to be postnatally focused and there is a need for research exploring these experiences during pregnancy. Given that there is growing awareness of the high incidence of mental health difficulties experienced during pregnancy, there is a need for a greater understanding of women's experiences during pregnancy ensure treatments and services consider its impact and can offer a more proactive approach.

Recent guidelines from NHS England's IAPT service emphasises the importance of women's psychological needs without giving a clear explanation of what these needs are (Perinatal Positive Practice guide IAPT NHS England 2013). This further underscores the need for research in this area to improve our understanding of psychological needs during pregnancy.

Psychological needs

Psychological needs within pregnancy are often discussed without definition. Models of psychological needs such as Self Determination Theory (SDT) define needs as universal and essential for psychological growth, wellness and integrity (Deci & Ryan 2000), operationalised through autonomy, relatedness and competency (Deci & Ryan 2000). As discussed above, current policy often references psychological needs of women during the perinatal period. However, these specific needs are rarely defined. Understanding the lived experience of women during pregnancy and identifying psychological needs would allow the development of services and supports to meet these needs.

Empirical evidence supports this conceptualisation of psychological needs across cultures, from a longitudinal perspective and within a range of contexts relating to wellbeing and specific outcomes (Chirkov, Ryan & Willnes 2005; Reis, Sheldon, Gable; Roscoe & Ryan 2000; Sheldon, Elliott, Kim & Kasser 2001; Sheldon & Kreiger 2007). Criticisms of the model include a lack of evidence that needs drive goal-directed preferences and that unmet psychological needs will result in focused behaviour to meet needs (Sheldon & Gunz 2009). Other critiques suggest the model should be expanded to include self-esteem and meaningfulness, Deci and Ryan have responded to much of the critique of their model and provided justification for their inclusion of three universal psychological needs (Ryan & Deci 2000).

This model represents universal psychological needs, so would therefore propose that these needs would continue to exist within pregnancy, what has not been considered is if there are other psychological needs specific to pregnancy.

Moving forward

As discussed above, current implementation policy often references psychological needs of women during the perinatal period. However, these specific needs are rarely defined. Understanding the lived experience of women during pregnancy and identifying psychological needs would allow the development of services and supports to meet these needs. Therefore, the current project explored the experiences of wellbeing throughout pregnancy of women with moderate to severe difficulties with their mental health, to attempt to understand the possible psychological needs they may have.

The following research question was addressed:

1. What are the possible psychological needs and other unmet needs of women experiencing moderate to severe difficulties with their mental health during pregnancy?

Secondary questions of interest were:

2. What are the expectations of women attending perinatal services of pregnancy and wellbeing during pregnancy?
3. What are the barriers to optimal care?

Method

Design

The study used Interpretive Phenomenological Analysis (IPA), an approach that focuses on exploring life experiences and how people make sense of these (Smith, Flower & Larkin 2009), drawing upon three key concepts: phenomenology, hermeneutics and idiography (Smith et al 2009). IPA requires lived experience to be explored in its own terms without use of a pre-set hypothesis of what the research will establish, as is the case in some other qualitative methodologies (Smith et al 2009). The role of the researcher is considered and their influence on the sense making during data collection and analysis is a key part of IPA. There is an acknowledgement that the researcher is involved in the sense making process as well as the participants (Smith et al 2009). IPA was selected for this study as the focus of this research is on exploring and understanding the lived experience of women having difficulties with their mental health during pregnancy and this fits with IPA's key focus on exploring life experiences and individuals sense making (Smith et al 2009). This study followed an IPA protocol as detailed in Smith et al (2009).

Ethics

The study received full ethical approval by a NHS Research Ethics Committee, local Research and Development office and University of Edinburgh (Appendices 7 & 8).

Recruitment

Recruitment took place via a local NHS Perinatal Mental Health Service (PMHS). Individuals were eligible if they were experiencing or had experienced moderate to severe MHDP (as identified by their lead clinician), were aged between 18-55 years and were able to provide informed consent. Individuals were excluded if they had known current child protection concerns, were non-fluent English speakers, were experiencing acute distress as identified by the lead clinician involved in their care or lacked capacity to consent to participating in active research of this nature. Staff within the service identified women that met inclusion and exclusion criteria and provided them with study information and an opt-in form (appendices 9 & 10). Informed consent was taken by the researcher (appendix 11). Although clinicians in the service were provided with a list of possible mental health difficulties to consider, inclusion wasn't diagnostically driven as the focus was on distress. Fourteen women expressed interest in participating, three of them did not reply to further contact after completing opt-in. Their reasons for not participating are not known. All interviews took place within local NHS facilities.

Participants

A total of n=11 women who had experienced moderate to severe MHDP participated. All participants were recruited via the PMHS and were engaged with services. A sample size of between 8-12 participants was aimed for, in keeping with Smith et al (2009) guidance on sampling for IPA research. Most of the women who participated (n=9) had already given birth prior to the interview taking place so described their experiences retrospectively. The high number of individuals describing their experiences retrospectively reflected timing of referral to services as

many individuals were seen towards the latter stages of pregnancy and it was felt most appropriate to interview them post birth. Demographic information of the participants is listed in table 1.

Data collection

Data was collected via semi-structured interviews, following IPA principles for interviewing (Smith et al 2009). Each interview was conducted by the researcher and was recorded using digital recorders. Interviews took an average of 82 minutes. An interview schedule was compiled (appendix 12) and used as a starting point for the interviews, however as per IPA principles the interview content was guided by participants. This was emphasised to each participant. The interviewer made it clear that participants could choose not to answer any questions and what they shared during the interview.

Analysis

Interviews were transcribed verbatim. Following transcription each interview was re-read and notes were made. Each interview was then coded, line-by-line, focusing on descriptive, linguistic and conceptual comments (Smith et al 2009). Once coding was complete, each interview was re-read and emergent themes were identified based on the coding (see Appendix 13 for short excerpt). Parts of the interview that were illustrative of each code, were highly meaningful or recurrent, were noted. The process of developing emergent themes aimed to capture the experience of both participants and the researcher. These themes were then explored at an in-depth level and where appropriate grouped together to form super-ordinate themes. This process was carried out for each interview individually and then themes were

compared and contrasted across all 11 interviews, before finalising super-ordinate and emergent themes, representative of overall interview content. Two interviews were also coded by the second researcher, to ensure validity of themes, emergent themes were discussed via supervision and the finalised themes were discussed in depth to ensure consistency with the IPA approach.

Reflexivity

Reflexivity denotes consideration of the influence of the researcher in the construction of meaning throughout the research process (Nightingale & Cromby 1999). The researcher was a female trainee clinical psychologist who had experience working with individuals experiencing psychological distress, although not specifically during pregnancy. Experience of supporting individuals in distress and building empathic relationships with individuals was thought to be a positive quality that could benefit participant engagement. The researcher did not have personal experience of pregnancy, a factor that could impact on the construction of meaning. It was hoped that this would allow the researcher not to be influenced by personal experiences and instead to ensure the voices of the participants was strongly heard.

Table 1: Participant Demographics¹

Participant number	Main reasons for referral to PMHS	Age Range	History of mental health difficulties	Primigravida
1	Depression and anxiety	35-40	Yes	No
2	Depression and anxiety	18-25	Yes	No
3	Depression and anxiety	35-40	No	Yes
4	Depression and anxiety	26-34	Yes	No
5	Depression, anxiety and eating disorder	35-40	Yes	Yes
6	Depression and anxiety	26-34	Yes	Yes
7	Anxiety and depression	35-40	No	Yes
8	Depression, anxiety and eating disorder	26-34	Yes	No
9	Anxiety and depression	35-40	No	No
10	Depression and OCD	26-34	No	Yes
11	Depression and anxiety	35-40	Yes	No

¹ Further details were not collected in order to maintain the anonymity of participants.

Results

Throughout the 11 interviews, a variety of emergent themes were identified and from these 7 superordinate themes arose, (see figure 1). Each theme and its emergent themes are discussed below, key indicative quotes for each superordinate theme are also detailed in table 2.

Figure 1 – Superordinate and Emergent Themes

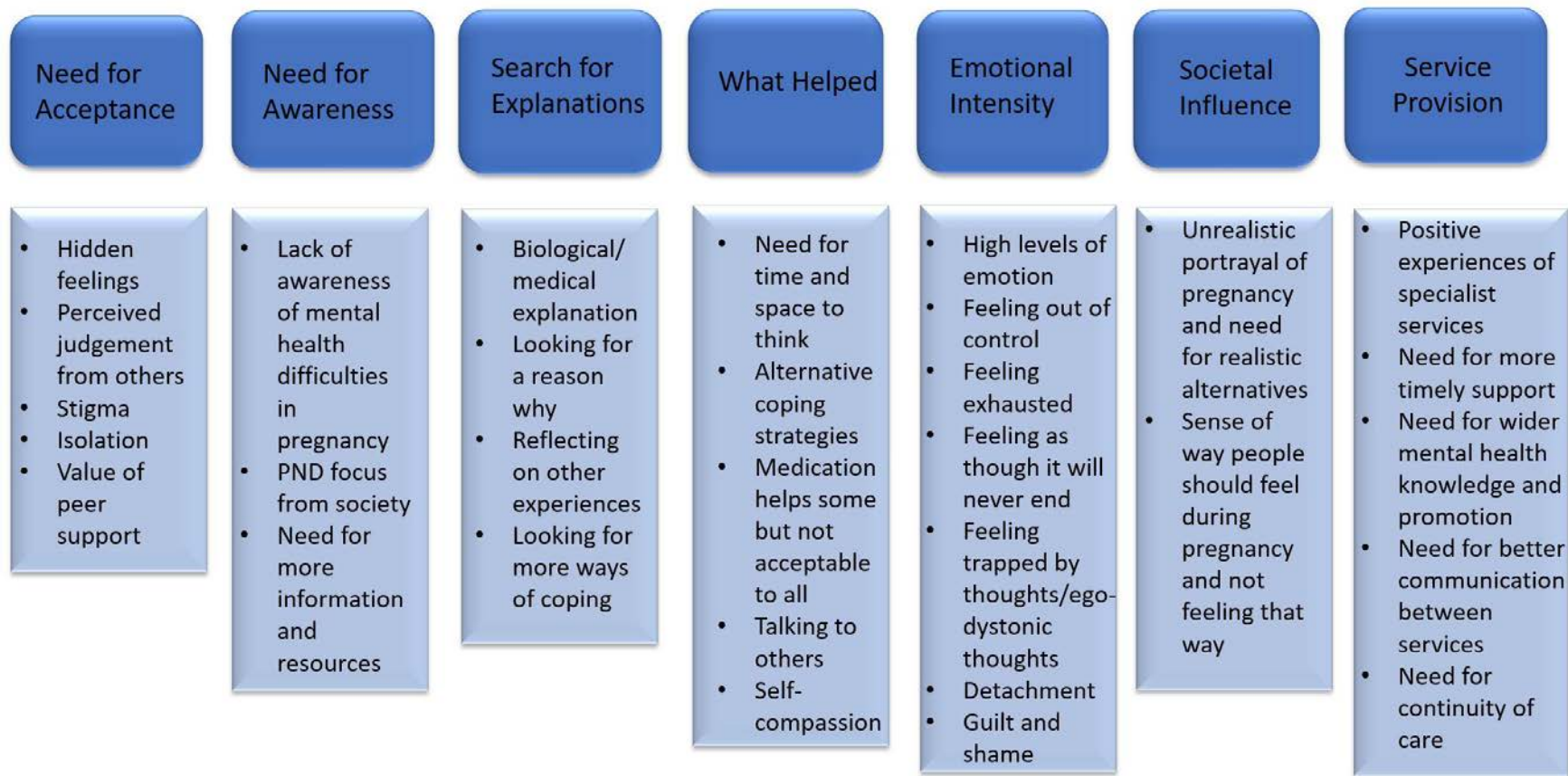


Table 2: Superordinate Themes and quotes indicative of these themes

Superordinate Theme	Indicative quotes
1. Need for acceptance	<p>'when I asked for help, but you feel like you can't, because what are they going to think of me if I can't do this' <i>P6</i></p> <p>'I was very good at putting a mask on things and pretending everything was ok and I think maybe part of that, that ends up feeling quite alone' <i>P11</i></p>
2. Need for awareness	<p>'I was shocked to find out how common it was and I was like I can't believe that nothing is done to make people aware' <i>P1</i></p> <p>'pregnancy it's still something that, it's not discussed or even, like even in the antenatal clinic it's not advertised about mental health during pregnancy there's nothing on the walls or, or even like I think there maybe was one poster in one room about a support group, but other than that there's no leaflets or em nothing to promote em positive mental health like I think, there's nothing advertising it' <i>P8</i></p>
3. Search for explanations	<p>'What is it and what made me like that, if it was the hormones, if it was my mum's experience, if it was the environment if it was the, I guess that it was a combination of things' <i>P3</i></p>
4. What helped	<p>'I think looking at the tiny little achievements throughout the day the fact that you got your shower, the fact that you went to your bed on time, the fact that you didn't eat that cake, or you ate that cake and you don't feel guilty about it you know silly things like that the anxiety will go away, well it might not all go away altogether because I know mine won't ever all go away altogether</p>

	but it does get easier to cope with' <i>P4</i>
5. Emotional intensity	<p>'I think certainly those kind of obsessional thoughts and worries definitely led me to isolate myself more from people, which em I think maybe didn't help, because that kind of, for my anyway, almost allows me to go deeper down the rabbit hole' <i>P11</i></p> <p>'you just can't see the end of it, you can't see the light at the end of the tunnel, you feel like everything is just going to keep getting more difficult and you're going to bring this baby into the world and it's going to be even more difficult' <i>P4</i></p> <p>'just that kind of numbness and just feeling disconnected from yourself and everyone else and, and the pregnancy as well you know from the baby and then that cycle of then that leading to you feeling guilt, because you felt that way about, about the baby' <i>P11</i></p>
6. Societal influence	<p>'I feel like everyone who was ever pregnant and spoke to me lied to me (laughter) that's what I feel like and people say things now like oh we never wanted to say to you what it was like, you don't want to scare someone and you're like you could have given me a heads up' <i>P6</i></p> <p>'yeah it is, it is just this expectation that you're going to be glowing and delighted unremittingly so... <i>P9</i></p> <p>'I think was down to where I was at the time and mentally thinking oh I'm such a dreadful mother, em you know there's all these risks with taking drugs during pregnancy all these perfect mothers online go one about how they drink kale smoothies and here I am</p>

	taking horrible chemicals' <i>P9</i>
7. Service provision	<p>'if I had the opportunity to take medication I wouldn't during pregnancy. There is no way, knowing myself that I would have. I would be begging for some consultation, some doctor with a specialist, like a psychologist, a psychiatrist a mental, a person that is specialist in mental health' <i>P3</i></p> <p>'it has been really helpful to talk to specialist midwife to hear that it's normal, other people go through these things and just to talk it all out really, just to say this is what's going on in my head, to verbalise what I'm feeling' <i>P10</i></p> <p>'I thought well that's like a long time (inaudible word) excuse my language, how's that going to help now? What's the point? It's what I was saying before like you need the help when you need the help not like months and months later when you've had to endure it on your own ' <i>P1</i></p>

Need for acceptance

All interviews communicated a need for acceptance. Each participant described ways in which they felt they had to hide how they were feeling (*Hidden feelings*) and perceived experiences of others' judgements. This conveyed a need for acceptance within society and by themselves. The experience of feeling judged by others was commonplace, as was experiences of stigma, with individuals either experiencing open negative comments (*Stigma*) or perceiving others as silently judging (*Perceived judgement from others*). This became a barrier to disclosing their true feelings (*Hidden feelings*) and in turn resulted in individuals feeling incredibly isolated (*Isolation*). Many participants attributed development of, or exacerbated difficulties, to hiding their feelings, feeling judged by others and isolation this contrasted with a sense that feeling accepted would have positively impacted on their experiences. In contrast, a number of participants highlighted peer support's role in acceptance and combatting negative experiences, sharing and gaining support from others who'd lived through the same experiences was key to some participants (*Value of peer support*).

'I never spoke to a soul about it' P7

'feeling so awful about thinking that as well and not being able to really tell anyone' P9

'there's such stigma still associated probably with, well mental health in general but to have mental health problems in pregnancy it's still something that, it's not discussed' P8

'definitely felt quite alone and isolating in that way as well, because em I didn't know of anyone else who had certainly ever said that they'd had em any issues in pregnancy' *P11*

'I say that kind of isolation I guess isn't quite so bad if there's other people that are kind of going through the same thing' *P5*

'just to see that other people have gone through this and have seen the end of it' *P2*

Need for awareness

The need for greater awareness of mental health difficulties occurring during pregnancy was highlighted in all interviews, many participants emphasised this as a key message they wished to communicate. There was a sense of being unaware of this until they experienced it, precipitating difficulties identifying from whom to seek support (*Lack of awareness during pregnancy*). The lack of awareness from those around them also impacted on their wellbeing and accessing of support. There was a recognition that individually and societally there is an awareness of PND (*PND focus from society*), with it often highlighted by services without difficulties in pregnancy being considered, for some this was alienating and frustrating.

The need for more information/resources was discussed in most interviews. Many participants tried to find information, commenting that little was available, and it was difficult to find.

'nobody had heard of it before. Everybody's heard of postnatal depression'
P1

'I think there's definitely less information out there about it during pregnancy'

P11

'I just feel like there's no information on it' P1

Search for Explanations

Participants reported trying to make sense of why they experienced MHDP and reflecting on possible influences. Focusing on a biological or medical explanation was commonplace. There was a sense that this explanation was often provided by services with no alternative explanation offered (*Biological/medical explanation*). In some cases, this was perceived as disempowering individuals - feeling that there was nothing they could do, and difficulties were inevitable. Despite this, there was often a sense that individuals were searching for further understanding of why they had difficult experiences (*Looking for a reason why*). As part of this search for an explanation, participants often reflected on their past experiences of mental health (*Reflecting on other experiences*). Women often reflected on looking for other ways of coping. There was a sense that pregnancy-related changes (physical and lifestyle) often acted as a barrier to accessing prior coping methods (*Looking for other ways of coping*).

'I can't fix my head there's nothing I can do about my head it's, your hormones are so my hormones were a mess'. P1

'I was depressed and sometimes I think there's two types of depression. I think there's the depression where it's completely chemical in your head and you can't do anything and there's situational depression where there's something that you need to change.' P1

'there's probably things like keeping busy helps, but I haven't got the energy, so that's very difficult em walking, you know just gentle exercise, but again I can't even just to go down into town' P9

What helped

There was a sense throughout most of the interviews that many of the women found very little helped them to feel less distressed during pregnancy and this was in fact quite a hopeless feeling, despite this when reflecting on their experience many of the women had a sense of what could have helped and this was often focused on with a feeling of what could have been. Communicating their thoughts on what could have helped also appeared to be a suggestion of what could help others in the future. From many of the participants there was a sense that time and space to think and reflect on the life changes they were experiencing would have helped, a sense that there was a need for adjustment. A few participants experienced improvements in their mood whilst taking a break from work, whereby reducing stressors also enabled time to think and others wondered if this could have made a difference to their experience as they started to struggle (*Need for time and Space*).

Despite the sense of hopelessness and lack of relief there was a sense that Short-term relief was possible for some and was obtained by seeking reassurance from health professionals. A small number of participants made use of coping strategies during their pregnancy including mindfulness or focusing on their children to motivate them (*Alternative coping strategies*). Those who found mindfulness beneficial had previously engaged with mindfulness prior to pregnancy there was a sense that many women had no previous experience to such techniques or other

psychological strategies that may have been beneficial to their mental health during pregnancy.

All participants described concern about possible harmful impact of medication on their baby. For some, this stopped them from taking medication until postnatally, whilst others felt the benefit to their mental health outweighed the risks. Overall there was a desire for more research and clearer information about medication (*Medication helps some but not acceptable to all*).

Talking to others, whether it be informal support networks, peers or professionals was repeatedly highlighted as an invaluable way of coping, although many women did not experience this during pregnancy. Participants described the benefits of having a non-judgemental space to talk, having another perspective and not being alone (*Talking to others*).

A clear sense of the need for self-compassion arose, often articulated as a message to others. This contrasted with the self-criticism and blame often reflected when describing their experiences, many of the participants did not appear to be compassionate towards themselves during pregnancy but reflecting on their experiences often spoke in this way and conveyed the need for others to be kind to themselves (*Self-compassion*).

'just tell them to hang on in there, it will get better' P1

'I it was very, very helpful talking with them because I didn't have to hide, I didn't have to pretend that I'm happy' P3.

'talked about it (medication) with the GP and at that stage I wasn't very keen...but by the time I saw specialist midwife I was still struggling and I was getting tired and I knew I wasn't right so she suggested it and I said yes, now is the time' P9

'but in actual fact you haven't had a minute to sit down and actually really think about everything that's happened or changed' P4

'I started doing mindfulness during pregnancy and I did find that really beneficial' P11

Emotional Intensity

All participants described intense emotional experiences, with daily impacts on functioning. For many there was a sense that they had to endure this and that they had 'survived' (*High levels of emotion*). Individuals often described conflicted feelings, still experiencing the joy of pregnancy at times, whilst then feeling incredibly low or anxious, this was often seen as disconcerting. Many participants described feeling out of control, due to how extreme their emotions felt or not understanding why they were feeling that way, this added to their distress (*Feeling out of control*).

Feeling exhausted was commonly expressed, participants appeared exhausted because of the physical impact of pregnancy and in struggling with their mental health (*Feeling exhausted*). Many individuals felt their difficulties would never end and expected to only feel worse when trying to cope once their baby was born (*Feeling as though it will never end*). Often participants felt trapped by their thoughts and many described feeling ashamed by the thoughts they had (*Feeling trapped by thoughts/ego-dystonic thoughts*).

Several participants expressed feeling disconnected from their pregnancy. They noted not feeling the bond or connection that they had expected, often reinforcing their distress. Some remarked that not connecting with the pregnancy may have been a way of coping, a sense of keeping their distance in case something went

wrong (*Detachment*). Guilt and shame were common to all interviews, with participants often describing themselves using critical language. Guilt was often expressed for having ego-dystonic thoughts, feeling different from their peers or related to comments from others. (*Guilt and Shame*).

'it was awful, it was anxiety I had panic attacks... it was like drowning' P3

'I just constantly felt like I'd been hit by a bus' P5

'I felt like the thoughts were out of control a little bit and it wasn't, well now I know they're intrusive thoughts' P8

'I was exhausted anyway for being pregnant, but I was absolutely shattered but I wasn't sleeping. I just you were lucky if I slept 2 or 3 hours' P4

'I felt guilty, like pretty much through the whole pregnancy for feeling the way that I did' P6

Societal Influence

The influence of society was powerfully reflected throughout all the interviews. This impacted on expectations about pregnancy, often reinforcing feelings of guilt and shame when their experience did not correspond to what was expected. Many participants highlighted the portrayal of pregnancy as an idyllic time without difficulty. Most described the impact of pregnancy on their physical and mental health as contrasting with this 'glowing' portrayal. There was a strong sense that this needs to change as the difference between expectations and reality increased levels of distress and shame. There was a need for a realistic portrayal of pregnancy, that highlighted its individual nature and difficulties, as well as the positives (*Unrealistic portrayal of pregnancy and need for realistic alternatives*).

Additionally, many described an expectation from society about how one *should* feel during pregnancy with a repeated suggestion that one should feel happy and excited without experiencing negative emotions. Again, feeling different from how one expected to feel compounded perceptions of shame and alienation during pregnancy and acted as a barrier to opening up (*Sense of way people should feel during pregnancy and not feeling that way*).

'I suppose until I got pregnant myself I would have bought into it, but then you suddenly realise no you feel sick, you've got heartburn, you ache, you're heavy, you can't do anything it's not all joyous' P6

'You're just meant to feel happy, when you're pregnant. People expect you to be em happy and glowing' P1

Service provision

Most participants commented on engaging with services. Many reflected positively on their experience with specialist perinatal mental health services, emphasising the value of non-judgemental listening in facilitating disclosures of their thoughts and feelings and the benefit of staff that had worked with others going through similar experiences (*Positive experiences of specialist services*). Despite positive experiences of specialist services, there was a need for earlier referrals. Participants were often not referred until postnatally, receiving no input during pregnancy. Many felt support wasn't available when they most needed it either due to delays in referrals, waiting times or opening up to professionals (*Need for more timely support*).

There was a recognition of the need for increased knowledge and promotion of perinatal mental health within wider health services. Many participants described difficult experiences in routine health care, with some perceiving non-mental health staff to be lacking knowledge and therefore, at times, insensitive in their responses. The need for services to talk about mental health during pregnancy was highlighted whether this be within maternity services prior to birth, antenatal education classes or at GP appointments (*Need for wider mental health knowledge and promotion*). A lack of communication between services caused difficulties for many participants, at times participants felt torn between conflicting advice between services (*Need for better communication between services*).

The importance of continuity of care was highlighted throughout, lack of it was a key barrier to disclosing difficulties. Participants reflected that time was required to build up relationships with professionals, this was often a facilitating factor in them feeling they could talk about their mental health. Many participants valued supportive relationships with professionals during their pregnancy including with community midwives and therapists. A number of individuals noted that consultant led antenatal care often resulted in seeing multiple doctors, and less time with midwives and this was a barrier to opening up (*Need for continuity of care*).

'I think had there been a better link between my GP, the psychiatrist and my psychotherapist it probably would have been a lot smoother for me instead of having to go and tell the story 3 times, basically every time' P6

'you see a different registrar every time, but that's it is that continuity of care, em and you know I can't fault anything that's been said or done, but I haven't got that same level of comfort that I had last time' P8

Discussion

This study provides insight into the lived experience of women with moderate to severe MHDP and the needs they may have. The participants were keen to share their experiences with the hope it could raise awareness of MHDP and in doing so make a difference to women experiencing similar difficulties in the future. This was represented in the key themes of 'need for awareness and 'need for acceptance'. There was a sense that there is little awareness of MHDP and this contributes to difficulties and desperately needs to change. The 'need for acceptance' reflected the sense that participants felt isolated and a need to hide how they felt. Furthermore, the theme of 'emotional intensity' reflected how intense and distressing MHDP can be with women clearly communicating, in a powerful manner, how incredibly difficult these experiences were. Further themes included 'search for explanations' where there was a sense that participants tried to understand why they were experiencing such difficulties, this alongside the theme of 'service provision' and 'what helped', highlight the need for change or development in health care provision for women experiencing MHDP. Finally, the theme of 'societal influence' highlighted the role society plays in MHDP, a theme found in prior research focused postnatally (Dolman et al 2013) and again suggests wider societal change could impact MHDP.

As participants were describing their difficulties during pregnancy this adds to existing literature focused on lived experience postnatally and on motherhood (Dolman et al 2013), giving an insight into what experiences such women may have during pregnancy. Understanding more about experience and needs during pregnancy could lead to raised awareness of MHDP and more consideration of how services and treatments could focus on earlier intervention, instead of intervening postnatally as is often the case due to barriers highlighted in the themes of this

study (lack of awareness, focus on PND, lack of information and resources and the need for wider knowledge of MHDP within health services).

The themes identified provide an idea of possible psychological needs and unmet needs that women experiencing difficulties with their mental health during pregnancy may undergo, particularly the need for acceptance, awareness, search for explanations and emotional intensity. Difficulties coping with emotional intensity alongside, for some, positive moments in pregnancy presents a unique need. Services could partly address this by normalising the range of emotions experienced during pregnancy. The research questions relating to expectations of services and barriers to accessing help were also addressed. The impact of lack of awareness resulted in women not realising that help was available or appropriate, often women did not perceive what they were experiencing as being mental health difficulties, which was a clear barrier to accessing help. Lack of acceptance often resulted in women not disclosing how they were truly feeling, an additional barrier. This reflects findings of Edwards and Timmons (2003) who found that stigma led to delays in accessing treatment and to isolation (Edwards & Timmons 2003). Women's expectations of wellbeing were highlighted in the societal influence theme, expectations were different from the reality of their experience which furthered distress and feelings of alienation, also resulting in a barrier to help-seeking.

One interpretation of the findings points to a tension between self and other-related elements of participant's lived experience. Self-related concepts identified point to the need for acceptance, search for explanations, emotional intensity and what helps. In contrast, the need for more awareness, societal influence and service provision related more to how participants reflected on their experiences of others perceptions of mental health during pregnancy. A thread throughout the interviews was the role of communication - including communication to others about feelings,

communication to normalise and increase acceptance as well as the need for services, health professionals and society to communicate more about mental health difficulties during pregnancy. This would suggest public health implications vis a vis how options for care of MHDP are communicated to women, could be key to improving experiences during pregnancy.

The themes discovered relate to the basic psychological needs from SDT, themes relating to others (need for more awareness and influence of society) and the need for acceptance appear to link with the concept of relatedness (Deci & Ryan 2000) and of belongingness (Baumeister & Leary 1995). This highlights the overlap between the needs identified and universal psychological needs, suggesting these are common to the experience of difficulties with mental health during pregnancy, but that perhaps there are key experiences during pregnancy that drive the need for acceptance, including the impact of feeling different from peers, experiences of stigma and the value of peer support. The difficulties coping with highly intense emotional states along with many physiological changes/difficulties, including changes to body image, hormonal changes, physical pain and fatigue, during pregnancy appears to be a need unique to pregnancy and may differentiate pregnancy from other stressful life events. Furthermore, the permanent changes to women's lives, relationships and, potentially, to their identities, that take place following pregnancy, as they adjust to motherhood, may separate pregnancy from other stressful life events that could have more of a temporary impact on people's lives.

The need for acceptance is consistent with results of other studies, that highlight the need to be understood and accepted both ante- and postnatally (Dolman et al 2013; Megnin-Viggars et al 2015; Staneva et al 2015). In addition, the value of peer support echoes Staneva et al (2015) observation of peer support as a safety net.

The normalising and validating power of peer support appeared to be a key part of acceptance, suggesting there is a need for more opportunities for pregnant women to access peer support.

Societal influences and the impact of expectations of pregnancy is also consistent with previous research, highlighting the gap between expectations and reality (Dolman et al 2013; Staneva & Wittkowski 2013). This theme relates to previously identified 'myths of motherhood' and expecting to be able to meet unrealistic expectations of society, this is often described as the 'superwoman' ideal that new mothers must conform to (Oakley 1979; Sears 1985). For participants in this study the gap between this ideal and the reality of their experience negatively impacted on their wellbeing and prevented them from sharing their feelings and seeking help. This also relates to the 'dealing with stigma' theme identified by Staneva et al (2015) where they highlight the idea of the 'perfect pregnancy' and 'what is proper for a pregnant woman to do, eat and feel', they emphasise the feelings of inadequacy women experience because of feeling different to this (Staneva et al 2015). Women in this study, also reflected on feeling ashamed and inadequate as a result of stigma, particularly direct experiences relating to their decision to take medication during pregnancy. The similarities between these themes identified across a number of studies provides evidence for the negative impact of societal implications during pregnancy and the need for change in how pregnancy is perceived and discussed. This theme has direct clinical implications, pointing to the need for clinicians involved in antenatal care to take a preventative approach, encourage discussions about expectations of pregnancy and to promote a 'sensible image of motherhood' (Staneva et al 2013).

The emergent theme, isolation, echoes previous research where loneliness was highlighted (Raymond 2009), providing further evidence for this theme. The need for

acceptance and hidden feelings resonates with aspects of the experience of 'spiralling down' described by Staneva et al (2015), again further supporting these themes and perhaps that meeting the need for acceptance could ease distress.

Whilst women reported that very little helped ease their distress during pregnancy, most reflected that time and space to process the changes in their life would have been beneficial. This suggests that time to adjust to pregnancy and the prospect of motherhood is sometimes lost, but is essential to processing such largescale life changes, this is concomitant with the notion of overall models of transition to motherhood, outwith mental health, that often cite this transition as beginning during pregnancy (Mercer 2004; Sawyer 1999).

There is a common theme throughout this study and previous research (Dolman et al 2013; Megnin-Viggars et al 2015), around a need for information about MHDP, about service provision and treatment options. Many participants spoke passionately about this, hoping for a change for other mothers who may feel the way they did in the future. The replication of this finding emphasises the need for this to change and more information to be provided. The need for continuity of care and improved communication was also highlighted by Megnin-Viggars et al (2015) and Dolman et al (2013). Again, these findings now being replicated for mothers experiencing moderate to severe difficulties with their mental health during pregnancy have implications for improving clinical practice and care of individuals.

Limitations

There are a number of limitations to acknowledge. First, as IPA requires purposive sampling this will always impact on the generalisability of results, and in the purpose of IPA research is not to try to represent the views of large disparate populations.

Second, there was risk of sampling bias due to the recruitment method – with the possibility of potential participants identified based on clinician’s subjective judgements of suitability. However, the researcher regularly met with clinicians to discuss recruitment and emphasise inclusion/exclusion criteria. Third, recruitment centred on one specialist service, biasing towards those already actively engaged with services. Therefore, results do not generalise to those not engaged with services. Although recruitment was focused on moderate-severe difficulties, rather than specific diagnoses, most participants experienced depression and anxiety disorders, and no participants opted in who experienced psychosis. This may have been a function of exclusion due to acute distress, clinician’s conservatism regarding referral or individuals choosing not to opt in.

Future Research

Future research could seek to build on the themes discovered in this study and exploring them within wider groups to see if they are applicable to more women during pregnancy. It would be of interest to conduct similar interviews with women recruited via other sources such as those accessing 3rd sector groups or if possible, those not engaged currently with support services – perhaps via self-referral. However, consideration would have to be given about how to ensure participants met inclusion/exclusion criteria.

It may be of interest to conduct quantitative research based on the themes found to reach a larger number of individuals with lived experience of such difficulties during pregnancy to see if they identify with those themes and how they respond to them. In order to establish if these experiences, and possible unmet needs, are unique to pregnancy, as opposed to any form of stressful life event, it could be of interest to

conduct a similar study exploring these themes with women experiencing stressful life events who are not pregnant.

Clinical Implications

There are a number of clinical implications that emerge from the study. There is a clear role for clinicians in promoting awareness of MHDP. This could be individually within appointments, to enhance disclosure of difficulties, or by normalising pregnancy related distress, or at a wider societal level. Quality Improvement changes such as posters and leaflets in antenatal clinic waiting rooms could raise awareness that these experiences are not uncommon. Across healthcare systems there is a need for those involved in maternity care to be more aware, to attempt to recognise MHDP and to licence conversations about mental health, facilitating disclosure and enhancing pathways to more timely support.

The need for wider treatment options and promotion of wider coping strategies than purely medical treatment options was repeatedly raised, there is a need for services to have wider treatment options available including those recommended in clinical guidelines, such as psychological therapies (NICE CG 192 2018). If services cannot provide such options directly, there should be clear treatment pathways to access these and clinicians in specialist services should consider referring to such treatments and making individuals aware that there are more options than just medication.

Conclusion

This study adds to the understanding of the lived experience, needs and possible psychological needs of women experiencing difficulties with their mental health during pregnancy. Themes identified highlight a need for increasing awareness and

normalising of difficulties during pregnancy, for wider promotion of mental health within maternity services and for a wider range of treatment options.

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Appendix 1 – Journal of Affective Disorder Guidelines

Types of Papers The Journal primarily publishes:

Full-Length Research Papers (up to 5000 words, excluding references and up to 6 tables/figures)

Review Articles and Meta-analyses (up to 8000 words, excluding references and up to 10 tables/ figures)

Short Communications (up to 2000 words, 20 references, 2 tables/figures)

Correspondence (up to 1000 words, 10 references, 1 table/figure).

At the discretion of the accepting Editor-in-Chief, and/or based on reviewer feedback, authors may be allowed fewer or more than these guidelines.

Preparation of Manuscripts

Articles should be in English. The title page should appear as a separate sheet bearing title (without article type), author names and affiliations, and a footnote with the corresponding author's full contact information, including address, telephone and fax numbers, and e-mail address (failure to include an e-mail address can delay processing of the manuscript).

Papers should be divided into sections headed by a caption (e.g., Introduction, Methods, Results, Discussion). A structured abstract of no more than 250 words should appear on a separate page with the following headings and order: Background, Methods, Results, Limitations, Conclusions (which should contain a statement about the clinical relevance of the research). A list of three to six key words should appear under the abstract. Authors should note that the 'limitations'

section both in the discussion of the paper AND IN A STRUCTURED ABSTRACT are essential. Failure to include it may delay in processing the paper, decision making and final publication.

Figures and Photographs

Figures and Photographs of good quality should be submitted online as a separate file. Please use a lettering that remains clearly readable even after reduction to about 66%. For every figure or photograph, a legend should be provided. All authors wishing to use illustrations already published must first obtain the permission of the author and publisher and/or copyright holders and give precise reference to the original work. This permission must include the right to publish in electronic media.

Tables

Tables should be numbered consecutively with Arabic numerals and must be cited in the text in sequence. Each table, with an appropriate brief legend, comprehensible without reference to the text, should be typed on a separate page and uploaded online. Tables should be kept as simple as possible and wherever possible a graphical representation used instead. Table titles should be complete but brief. Information other than that defining the data should be presented as footnotes.

Abstract

A concise and factual abstract is required. The abstract should state briefly the purpose of the research, the principal results and major conclusions. An abstract is often presented separately from the article, so it must be able to stand alone. For this reason, References should be avoided, but if essential, then cite the author(s) and year(s). Also, non-standard or uncommon abbreviations should be avoided, but if essential they must be defined at their first mention in the abstract itself. Graphical

abstract Although a graphical abstract is optional, its use is encouraged as it draws more attention to the online article. The graphical abstract should summarize the contents of the article in a concise, pictorial form designed to capture the attention of a wide readership. Graphical abstracts should be submitted as a separate file in the online submission system.

Highlights

Highlights are mandatory for this journal. They consist of a short collection of bullet points that convey the core findings of the article and should be submitted in a separate editable file in the online submission system. Please use 'Highlights' in the file name and include 3 to 5 bullet points (maximum 85 characters, including spaces, per bullet point). You can view example Highlights on our information site. Keywords Immediately after the abstract, provide a maximum of 6 keywords, using American spelling and avoiding general and plural terms and multiple concepts (avoid, for example, 'and', 'of'). Be sparing with abbreviations: only abbreviations firmly established in the field may be eligible. These keywords will be used for indexing purposes.

References Citation in text

Please ensure that every reference cited in the text is also present in the reference list (and vice versa). Any references cited in the abstract must be given in full. Unpublished results and personal communications are not recommended in the reference list, but may be mentioned in the text. If these references are included in the reference list they should follow the standard reference style of the journal and should include a substitution of the publication date with either 'Unpublished results' or 'Personal communication'. Citation of a reference as 'in press' implies that the item has been accepted for publication.

Reference style Text:

All citations in the text should refer to:

1. Single author: the author's name (without initials, unless there is ambiguity) and the year of publication; 2. Two authors: both authors' names and the year of publication; 3. Three or more authors: first author's name followed by 'et al.' and the year of publication. Citations may be made directly (or parenthetically). Groups of references should be listed first alphabetically, then chronologically. Examples: 'as demonstrated (Allan, 2000a, 2000b, 1999; Allan and Jones, 1999). Kramer et al. (2010) have recently shown'

List:

References should be arranged first alphabetically and then further sorted chronologically if necessary. More than one reference from the same author(s) in the same year must be identified by the letters 'a', 'b', 'c', etc., placed after the year of publication. Examples: Reference to a journal publication: Van der Geer, J., Hanraads, J.A.J., Lupton, R.A., 2010. The art of writing a scientific article. *J. Sci. Commun.* 163, 51–59. Reference to a book: Strunk Jr., W., White, E.B., 2000. *The Elements of Style*, fourth ed. Longman, New York. Reference to a chapter in an edited book: Mettam, G.R., Adams, L.B., 2009. How to prepare an electronic version of your article, in: Jones, B.S., Smith, R.Z. (Eds.), *Introduction to the Electronic Age*. E-Publishing Inc., New York, pp. 281–304. Reference to a website: Cancer Research UK, 1975. Cancer statistics reports for the UK. <http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/> (accessed 13 March 2003).

Appendix 2 – Full list of Search Terms by database

OVID 1946- 2018

Perinatal search terms

Pregnancy
Perinatal care
Postnatal care
Postnatal (keyword)
Postpartum period
Mothers
Motherhood
Prenatal care
Antenatal (key word)
Pregnant women

Mental health terms

Puerperal disorders
Depression, postpartum
Depression
Anxiety disorders
Depressive disorder
Anxiety
Mental disorders
Mental health

Peer support terms

Peer group
Social support
Peer support (key word)
Psychological stress
Support worker (key word)

Non professional support (key word)

Lay support

Cinhal 1990- 2018

Perinatal terms

Pregnancy complications psychiatric

Pregnancy

Postnatal care

Prenatal care

Perinatal care

Postnatal period

Motherhood

Maternal attitudes

Mental Health Terms

Depression postpartum

Psychosis postpartum

Mental health

Mental disorders

Peer Support Terms

Support, psychological

Peer group

Peer support (key word)

Non professional support (key word)

Support group

Psychinfo 1985-2017

Perinatal Terms

Pregnancy

Prenatal care

Postnatal period

Perinatal period

Mental Health Terms

Mental health

Mental disorders

Peer Support Terms

Social support

Support groups

Peers

Social networks

Embase same search terms as OVID 1974-2018

Appendix 3 MMAT quality assessment rating example - Qualitative

Atif et al 2017

Types of mixed methods study components or primary studies	Methodological quality criteria (see tutorial for definitions and examples) Responses	Responses				
		Yes	Partly	No	Can't tell	comments
Screening questions for all types	<ul style="list-style-type: none"> Are there clear qualitative and quantitative research questions (or objectives*), or a clear mixed methods question (or objective*)? 	✓				Clearly stated aims and rationale, relevance explained
	<ul style="list-style-type: none"> Do the collected data allow address the research question (objective)? E.g., consider whether the follow-up period is long enough for the outcome to occur (for longitudinal studies or study components). 	✓				Interviews completed after intervention
Qualitative	1.1. Are the sources of qualitative data (archives, documents, informants, observations) relevant to address the research question (objective)?		✓			Selection of participants clear -description of inclusion/exclusion and how approached – no information about number who decided not to participate and why
	1.2. Is the process for analysing qualitative data relevant to address the research question (objective)?	✓				Use of interviews and focus groups – all data recorded. Topic guides used (not listed). Detail about process of analysis

	1.3. Is appropriate consideration given to how findings relate to the context, e.g., the setting, in which the data were collected?	✓				Discussion about context of socioeconomic/geographical context, information about health service in area. Identify limitations based on context.
	1.4. Is appropriate consideration given to how findings relate to researchers' influence, e.g., through their interactions with participants?			✓		Information not provided about researchers other than noting that they are trained.

Types of mixed methods study components or primary studies	Methodological quality criteria
<p>1. Qualitative</p> <p>Common types of qualitative research methodology include:</p> <p>A. Ethnography</p> <p>The aim of the study is to describe and interpret the shared cultural behaviour of a group of individuals.</p>	<p>1.1. Are the sources of qualitative data (archives, documents, informants, observations) relevant to address the research question (objective)?</p> <p>E.g., consider whether (a) the selection of the participants is clear, and appropriate to collect relevant and rich data; and (b) reasons why certain potential participants chose not to participate are explained.</p> <p>1.2. Is the process for analysing qualitative data relevant to address the research question (objective)?</p> <p>E.g., consider whether (a) the method of data collection is clear (in depth interviews and/or group</p>

<p>B. Phenomenology</p> <p>The study focuses on the subjective experiences and interpretations of a phenomenon encountered by individuals.</p>	<p>interviews, and/or observations and/or documentary sources); (b) the form of the data is clear (tape recording, video material, and/or field notes for instance); (c) changes are explained when methods are altered during the study; and (d) the qualitative data analysis addresses the question.</p>
<p>C. Narrative</p> <p>The study analyses life experiences of an individual or a group.</p> <p>D. Grounded theory</p> <p>Generation of theory from data in the process of conducting research (data collection occurs first).</p> <p>E. Case study</p> <p>In-depth exploration and/or explanation of issues intrinsic to a particular case. A case can be anything from a decision-making process, to a person, an organization, or a country.</p> <p>F. Qualitative description</p> <p>There is no specific methodology, but a qualitative data collection</p>	<p>1.3. Is appropriate consideration given to how findings relate to the context, e.g., the setting, in which the data were collected?</p> <p>E.g., consider whether the study context and how findings relate to the context or characteristics of the context are explained (how findings are influenced by or influence the context). “For example, a researcher wishing to observe care in an acute hospital around the clock may not be able to study more than one hospital. (...) Here, it is essential to take care to describe the context and particulars of the case [the hospital] and to flag up for the reader the similarities and differences between the case and other settings of the same type” (Mays & Pope, 1995).</p> <p>The notion of context may be conceived in different ways depending on the approach (methodology) tradition.</p>
<p>and analysis, e.g., in-depth interviews or focus groups, and hybrid</p>	<p>1.4. Is appropriate consideration given to how findings relate to researchers’ influence, e.g., through their interactions with participants?</p>

thematic analysis (inductive and deductive).

Key references: Creswell, 1998; Schwandt, 2001; Sandelowski, 2010.

E.g., consider whether (a) researchers critically explain how findings relate to their perspective, role, and interactions with participants

(how the research process is influenced by or influences the researcher); (b) researcher's role is influential at all stages (formulation of a

research question, data collection, data analysis and interpretation of findings); and (c) researchers explain their reaction to critical events

that occurred during the study.

The notion of reflexivity may be conceived in different ways depending on the approach (methodology) tradition. E.g., "at a minimum,

researchers employing a generic approach [qualitative description] must explicitly identify their disciplinary affiliation, what brought

them to the question, and the assumptions they make about the topic of interest" (Caelli, Ray & Mill, 2003, p. 5).

Appendix 4 - Quality Assessment Rating Example (Mixed Methods)

Quality assessment: Mixed methods Cust 2016

Types of mixed methods study components or primary studies	Methodological quality criteria (see tutorial for definitions and examples) Responses	Responses				
		Yes	Partly	No	Can't tell	comments
Screening questions for all types	<ul style="list-style-type: none"> Are there clear qualitative and quantitative research questions (or objectives*), or a clear mixed methods question (or objective*)? 	✓				Clear aims
	<ul style="list-style-type: none"> Do the collected data allow address the research question (objective)? E.g., consider whether the follow-up period is long enough for the outcome to occur (for longitudinal studies or study components). 	✓				Use of EPDS standardised measure to assess change
Qualitative	1.1. Are the sources of qualitative data (archives, documents, informants, observations) relevant to address the research question (objective)?		✓			EPDS used to screen participants so clearly meeting research question with PPD. Doesn't fully describe how recruited or if

						people chose not to participate and why
	1.2. Is the process for analysing qualitative data relevant to address the research question (objective)?		✓			Semi structured interviews used, no information about how recorded, comparative analysis used, included log books. Checked themes with participants.
	1.3. Is appropriate consideration given to how findings relate to the context, e.g., the setting, in which the data were collected?			✓		No consideration of context at any stage

	1.4. Is appropriate consideration given to how findings relate to researchers' influence, e.g., through their interactions with participants?			✓	no consideration of researchers influence at any stage
4. Quantitative descriptive	4.1. Is the sampling strategy relevant to address the quantitative research question (quantitative aspect of the mixed methods question)?			✓	no information about sample sizes, no clear strategies apart from EPDS cut off
	4.2. Is the sample representative of the population understudy?			✓	No information about inclusion/exclusion apart from EPDS cut off, no information about who didn't participate. No further details about participants
	4.3. Are measurements appropriate (clear origin, or validity known, or standard instrument)?	✓			EPDS validated measure and standardised
	4.4. Is there an acceptable response rate (60% or above)?			✓	No information about response rate

	4.5 <i>Is the analysis conducted appropriate?</i>		✓		No acknowledgement of small sample size when explaining analysis, analysis described and then not reported. No power analysis. SD and means reported, non parametric tests presumably used due to small sample size
5. Mixed methods	5.1. Is the mixed methods research design relevant to address the qualitative and quantitative research questions (or objectives), or the qualitative and quantitative aspects of the mixed methods question (or objective)?		✓		The rationale for using mixed methods is explained – but state that quant part is used to make up for small sample size which isn't a great rationale, did also include rationale for using mixed methods as well

	5.2. Is the integration of qualitative and quantitative data (or results*) relevant to address the research question (objective)?		✓			Describe value of using both approaches and both results commented, but not fully integrated in conclusions
	5.3. Is appropriate consideration given to the limitations associated with this integration, e.g., the divergence of qualitative and quantitative data (or results*) in a triangulation design?			✓		Limitations of integration not considered
<p><i>Criteria for the qualitative component (1.1 to 1.4), and appropriate criteria for the quantitative component (2.1 to 2.8, or 3.1 to 3.5, or 4.1 to 4.5), must be also applied.</i></p>						

Types of mixed methods study components or primary studies	Methodological quality criteria
<p>1. Qualitative</p> <p>Common types of qualitative research methodology include:</p> <p>A. Ethnography</p> <p>The aim of the study is to describe and interpret the shared cultural</p>	<p>1.1. Are the sources of qualitative data (archives, documents, informants, observations) relevant to address the research question (objective)?</p> <p>E.g., consider whether (a) the selection of the participants is clear, and appropriate to collect relevant and rich data; and (b) reasons why certain potential participants chose not to participate are explained.</p>

<p>behaviour of a group of individuals.</p> <p>B. Phenomenology</p> <p>The study focuses on the subjective experiences and interpretations of a phenomenon encountered by individuals.</p> <p>C. Narrative</p> <p>The study analyses life experiences of an individual or a group.</p>	<p>1.2. Is the process for analysing qualitative data relevant to address the research question (objective)?</p> <p>E.g., consider whether (a) the method of data collection is clear (in depth interviews and/or group interviews, and/or observations and/or documentary sources); (b) the form of the data is clear (tape recording, video material, and/or field notes for instance); (c) changes are explained when methods are altered during the study; and (d) the qualitative data analysis addresses the question.</p>
<p>D. Grounded theory</p> <p>Generation of theory from data in the process of conducting research (data collection occurs first).</p> <p>E. Case study</p> <p>In-depth exploration and/or explanation of issues intrinsic to a particular case. A case can be anything from a decision-making process, to a person, an organization, or a country.</p> <p>F. Qualitative description</p> <p>There is no specific methodology, but a qualitative data collection and analysis, e.g., in-depth interviews or focus groups,</p>	<p>1.3. Is appropriate consideration given to how findings relate to the context, e.g., the setting, in which the data were collected?</p> <p>E.g., consider whether the study context and how findings relate to the context or characteristics of the context are explained (how findings are influenced by or influence the context). “For example, a researcher wishing to observe care in an acute hospital around the clock may not be able to study more than one hospital. (...) Here, it is essential to take care to describe the context and particulars of the case [the hospital] and to flag up for the reader the similarities and differences between the case and other settings of the same type” (Mays & Pope, 1995).</p> <p>The notion of context may be conceived in different ways depending on the approach (methodology) tradition.</p>
	<p>1.4. Is appropriate consideration given to how findings relate to researchers’ influence, e.g., through</p>

<p>and hybrid thematic analysis (inductive and deductive).</p> <p>Key references: Creswell, 1998; Schwandt, 2001; Sandelowski, 2010.</p>	<p>their interactions with participants?</p> <p>E.g., consider whether (a) researchers critically explain how findings relate to their perspective, role, and interactions with participants (how the research process is influenced by or influences the researcher); (b) researcher’s role is influential at all stages (formulation of a research question, data collection, data analysis and interpretation of findings); and (c) researchers explain their reaction to critical events that occurred during the study.</p> <p>The notion of reflexivity may be conceived in different ways depending on the approach (methodology) tradition. E.g., “at a minimum, researchers employing a generic approach [qualitative description] must explicitly identify their disciplinary affiliation, what brought them to the question, and the assumptions they make about the topic of interest” (Caelli, Ray & Mill, 2003, p. 5).</p>
<p>4. Quantitative descriptive studies</p> <p>Common types of design include single-group studies:</p> <p>A. Incidence or prevalence study without comparison group</p> <p>In a defined population at one particular time, what is</p>	<p>4.1. Is the sampling strategy relevant to address the quantitative research question (quantitative aspect of the mixed methods question)?</p> <p>E.g., consider whether (a) the source of sample is relevant to the population under study; (b) when appropriate, there is a standard procedure for sampling, and the sample size is justified (using power calculation for</p>

<p>happening in a population, e.g., frequencies of factors (importance of problems), is described (portrayed).</p> <p>B. Case series</p> <p>A collection of individuals with similar characteristics are used to describe an outcome.</p> <p>C. Case report</p> <p>An individual or a group with a unique/unusual outcome is described in details.</p> <p>Key references: Critical Appraisal Skills Programme, 2009; Draugalis, Coons & Plaza, 2008.</p>	instance).
	<p>4.2. Is the sample representative of the population under study?</p> <p>E.g., consider whether (a) inclusion and exclusion criteria are explained; and (b) reasons why certain individuals chose not to participate are explained.</p>
	<p>4.3. Are measurements appropriate (clear origin, or validity known, or standard instrument)?</p> <p>E.g., consider whether (a) the variables are clearly defined and accurately measured; (b) measurements are justified and appropriate for answering the research question; and (c) the measurements reflect what they are supposed to measure.</p>
	<p>4.4. Is there an acceptable response rate (60% or above)?</p> <p>The response rate is not pertinent for case series and case report. E.g., there is no expectation that a case series would include all patients in a similar situation.</p>
	<p>4.5 <i>Is the analysis conducted appropriate?</i></p> <p><i>Were the methods of analysis conducted appropriate for the type of outcome data (categorical, continuous, etc.)?</i></p>

	<p><i>Were the methods of analysis conducted appropriate for the type of outcome data (categorical, continuous, etc.)?</i></p> <p><i>Were the statistical techniques appropriate for the data and sample size take into account issues such as controlling for small sample size, clustering, rare outcomes, multiple comparison, and number of covariates for a given sample size)</i></p> <p><i>Are all key variables included in the analysis? Is anything not reported?</i></p> <p><i>Was a power analysis reported?</i></p>
<p>5. Mixed methods</p> <p>Common types of design include:</p> <p>A. Sequential explanatory design</p> <p>The quantitative component is followed by the qualitative. The purpose is to explain quantitative results using qualitative findings. E.g., the quantitative results guide the selection of qualitative data sources and data collection, and the qualitative findings contribute to the interpretation of quantitative results.</p> <p>B. Sequential exploratory design</p> <p>The qualitative component is followed by the quantitative. The purpose is to explore, develop and test an instrument (or taxonomy), or a conceptual framework (or theoretical model). E.g., the qualitative findings inform the quantitative data</p>	<p>5.1. Is the mixed methods research design relevant to address the qualitative and quantitative research questions (or objectives), or the qualitative and quantitative aspects of the mixed methods question (or objective)?</p> <p>E.g., the rationale for integrating qualitative and quantitative methods to answer the research question is explained.</p> <hr/> <p>5.2. Is the integration of qualitative and quantitative data (or results) relevant to address the research question (objective)?</p> <p>E.g., there is evidence that data gathered by both research methods was brought together to form a complete picture, and answer the research question; authors explain when integration occurred (during the data collection-analysis or/and during the interpretation of qualitative and quantitative results); they</p>

<p>collection, and the quantitative results allow a generalization of the qualitative findings.</p> <p>C. Triangulation design</p>	<p>explain how integration occurred and who participated in this integration.</p>
<p>The qualitative and quantitative components are concomitant. The purpose is to examine the same phenomenon by interpreting qualitative and quantitative results (bringing data analysis together at the interpretation stage), or by integrating qualitative and quantitative datasets (e.g., data on same cases), or by transforming data (e.g., quantization of qualitative data).</p> <p>D. Embedded design</p> <p>The qualitative and quantitative components are concomitant. The purpose is to support a qualitative study with a quantitative sub-study (measures), or to better understand a specific issue of a quantitative study using a qualitative sub-study, e.g., the efficacy or the implementation of an intervention based on the views of participants.</p> <p>Key references: Creswell & Plano Clark, 2007; O’Cathain, 2010.</p>	<p>5.3. Is appropriate consideration given to the limitations associated with this integration, e.g., the divergence of qualitative and quantitative data (or results)?</p>

Appendix 5 – Quality Assessment Rating Example - RCT

Types of mixed methods study components or primary studies	Methodological quality criteria (see tutorial for definitions and examples) Responses	Responses				
		Yes	Partly	No	Can't tell	comments
Screening questions for all types	<ul style="list-style-type: none"> Are there clear qualitative and quantitative research questions (or objectives*), or a clear mixed methods question (or objective*)? 	✓				Clearly stated objective. Clear hypotheses that included definitions based on outcome measures.
	<ul style="list-style-type: none"> Does the collected data address the research question (objective)? E.g., consider whether the follow-up period is long enough for the outcome to occur (for longitudinal studies or study components). 	✓				Use of outcome measures, clear sample relating to question,
<i>Further appraisal may be not feasible or appropriate when the answer is 'No' or 'Can't tell' to one or both screening questions.</i>						
2. Quantitative randomized controlled (trials)	2.1 Are participants recruited in a way that minimises selection bias?	✓				Recruitment strategy clearly described. Validated measure used for diagnostic purposes. Clear inclusion/exclusion appears relevant. And sample from 7 large health regions recruited via standard screening so appears representative.

	2.2 Is there a clear description of the randomization (or an appropriate sequence generation)?	✓				Clear description of randomisation and when it occurred, use of online system to do so. Stratification based on hx of depression
	2.3. Is there a clear description of the allocation concealment (or blinding when applicable)?	✓				Measures conducted over the phone by blinded research nurse. Study notes that participants couldn't be blinded, but health professionals etc providing standard community care were
	2.4. <i>Are measurements appropriate (clear origin, or validity known, or standard instrument; and absence of contamination between groups when appropriate) regarding the exposure/intervention and outcomes?</i>	✓				Validated measures used for PPD. Self-reported measures piloted. Noted that they have good psychometric properties. All standard measures.

	2.5. Are there complete outcome data (80% or above)?	✓				At 12 week (mid-point) 87.4% and follow up 85.6%
	2.6. Is there low withdrawal/drop-out (below 20%)?				✓	Drop-out rate not reported specifically – could be assumed from levels of completed outcome data that it's below 20%, but no reasons for loss to follow up reported so could have been participating, but then lost to follow up.
	2.7 <i>Is the analysis conducted appropriate?</i>	✓				Power calculation reported. All key outcome measures are reported. Sig levels adjusted for multiples comparisons. Different statistical tests used for different types of data – seem appropriate. Assumptions considered for models and clear description of how model was generated

	2.8 Is there follow up and if so is it an acceptable rate?		✓		Follow up at 24 weeks – no explanation of why 24 weeks chosen as follow up.
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<p>2. Quantitative randomized controlled (trials)</p> <p>Randomized controlled clinical trial: A clinical study in which individual participants are allocated to intervention or control groups by randomization (intervention assigned by researchers).</p> <p>Key references: Higgins & Green, 2008; Porta, 2008; Oxford Center for Evidence</p>	<p>2.1 Are participants (organizations) recruited in a way that minimizes selection bias?</p> <p>At recruitment stage:</p> <p>Are inclusion/exclusion criteria clearly defined and relevant to research question (e.g. excluded as potentially confounder)?</p> <p>If sample is diagnosis based, have they used a validated measure to make this diagnosis?</p> <p>Is the sample representative of the general population?</p> <p>Is the recruitment strategy clearly described?</p>
	<p>2.2. Is there a clear description of the randomization (or an appropriate sequence generation)?</p> <p>In a randomized controlled trial, the allocation of a participant (or a data collection unit, e.g., a school) into the intervention or control group is based solely on chance, and researchers describe how the randomization schedule is generated. “A simple statement such as ‘we randomly allocated’ or ‘using a randomized design’ is insufficient”.</p>

<p>based medicine, 2009.</p>	<p>Simple randomization: Allocation of participants to groups by chance by following a predetermined plan/sequence. “Usually it is achieved by referring to a published list of random numbers, or to a list of random assignments generated by a computer”.</p> <p>Sequence generation: “The rule for allocating interventions to participants must be specified, based on some chance (random) process”. Researchers provide sufficient detail to allow a readers’ appraisal of whether it produces comparable groups. E.g., blocked randomization (to ensure particular allocation ratios to the intervention groups), or stratified randomization (randomization performed separately within strata), or minimization (to make small groups closely similar with respect to several characteristics).</p>
	<p>2.3. Is there a clear description of the allocation concealment (or blinding when applicable)?</p> <p>The allocation concealment protects assignment sequence until allocation. E.g., researchers and participants are unaware of the assignment sequence up to the point of allocation. E.g., group assignment is concealed in opaque envelopes until allocation.</p> <p>The blinding protects assignment sequence after allocation. E.g., researchers and/or participants are unaware of the group a participant is allocated to during the course of the study.</p>
	<p>2.4. <i>Are measurements appropriate (clear origin, or validity known, or standard instrument; and absence of contamination between groups when appropriate) regarding the exposure/intervention and outcomes?</i></p> <p>At data collection stage:</p>

	<p>E.g., consider whether (a) the variables are clearly defined and accurately measured; (b) the measurements are justified and appropriate for answering the research question; and (c) the measurements reflect what they are supposed to measure.</p> <p>For non-randomized controlled trials, the intervention is assigned by researchers, and so consider whether there was absence/presence of a contamination. E.g., the control group may be indirectly exposed to the intervention through family or community relationships.</p>
	<p>2.5. Are there complete outcome data (80% or above)?</p> <p>E.g., almost all the participants contributed to almost all measures.</p>
	<p>2.6. Is there low withdrawal/drop-out (below 20%)?</p> <p>E.g., almost all the participants completed the study.</p>
	<p><i>2.7 Is the analysis conducted appropriate?</i></p> <p><i>Were the methods of analysis conducted appropriate for the type of outcome data (categorical, continuous, etc.)?</i></p> <p><i>Were the methods of analysis conducted appropriate for the type of outcome data (categorical, continuous, etc.)?</i></p> <p><i>Were the statistical techniques appropriate for the data and sample size take into account issues such as controlling for small sample size, clustering, rare outcomes, multiple comparison, and number of covariates for a given sample size)</i></p> <p><i>Are all key variables included in the analysis? Is anything not reported?</i></p> <p><i>Was a power analysis reported?</i></p>

2.8 Is there follow up and if so is it an acceptable rate?

Is the follow-up period appropriate, or it is too short/long? Consider the research question and if this seems like an appropriate length

Is their justification for the length of follow up?

Appendix 6 – Journal Guidelines for Psychology and Psychotherapy: Theory, Research and Practice (2018)

Author Guidelines

Psychology and Psychotherapy: Theory Research and Practice (formerly The British Journal of Medical Psychology) is an international scientific journal with a focus on the psychological aspects of mental health difficulties and well-being; and psychological problems and their psychological treatments. We welcome submissions from mental health professionals and researchers from all relevant professional backgrounds. The Journal welcomes submissions of original high quality empirical research and rigorous theoretical papers of any theoretical provenance provided they have a bearing upon vulnerability to, adjustment to, assessment of, and recovery (assisted or otherwise) from psychological disorders. Submission of systematic reviews and other research reports which support evidence-based practice are also welcomed, as are relevant high quality analogue studies. The Journal thus aims to promote theoretical and research developments in the understanding of cognitive and emotional factors in psychological disorders, interpersonal attitudes, behaviour and relationships, and psychological therapies (including both process and outcome research) where mental health is concerned. Clinical or case studies will not normally be considered except where they illustrate particularly unusual forms of psychopathology or innovative forms of therapy and meet scientific criteria through appropriate use of single case experimental designs.

All papers published in Psychology and Psychotherapy: Theory, Research and Practice are eligible for Panel A: Psychology, Psychiatry and Neuroscience in the Research Excellence Framework (REF).

1. Circulation

The circulation of the Journal is worldwide. Papers are invited and encouraged from authors throughout the world.

2. Length

All articles submitted to PAPT must adhere to the stated word limit for the particular article type. The journal operates a policy of returning any papers that are over this word limit to the authors. The word limit does not include the abstract, reference list, figures and tables. Appendices however are included in the word limit. The Editors retain discretion to publish papers beyond this length in cases where the clear and concise expression of the scientific content requires greater length (e.g., a new theory or a new method). The authors should contact the Editors first in such a case.

Word limits for specific article types are as follows:

- Research articles: 5000 words
- Qualitative papers: 6000 words
- Review papers: 6000 words
- Special Issue papers: 5000 words

3. Brief reports

These should be limited to 1000 words and may include research studies and theoretical, critical or review comments whose essential contribution can be made briefly. A summary of not more than 50 words should be provided.

4. Submission and reviewing

All manuscripts must be submitted via [Editorial Manager](#). The Journal operates a policy of anonymous (double blind) peer review. We also operate a triage process in which submissions that are out of scope or otherwise inappropriate will be rejected by the editors without external peer review to avoid unnecessary delays. Before submitting, please read the [terms and conditions of submission](#) and the [declaration of competing interests](#). You may also like to use the [Submission Checklist](#) to help you prepare your paper. If you need more information about submitting your manuscript for publication, please email Vicki Pang, Editorial Assistant at papt@wiley.com or phone +44 (0) 1243 770 410.

5. Manuscript requirements

- Contributions must be typed in double spacing with wide margins. All sheets must be numbered.
- Manuscripts should be preceded by a title page which includes a full list of authors and their affiliations, as well as the corresponding author's contact details. You may like to use [this](#) template. When entering the author names into Editorial Manager, the corresponding author will be asked to provide a CRediT contributor role to classify the role that each author played in creating the manuscript. Please see the [Project CRediT](#) website for a list of roles.
- The main document must be anonymous. Please do not mention the authors' names or affiliations (including in the Method section) and refer to any previous work in the third person.
- Tables should be typed in double spacing, each on a separate page with a self-explanatory title. Tables should be comprehensible without reference to the text. They should be placed at the end of the manuscript but they must be mentioned in the text.
- Figures can be included at the end of the document or attached as separate files, carefully labelled in initial capital/lower case lettering with symbols in a form consistent with text use. Unnecessary background patterns, lines and shading should be avoided. Captions should be listed on a separate sheet. The resolution of digital images must be at least 300 dpi. All figures must be mentioned in the text.
- For articles containing original scientific research, a structured abstract of up to 250 words should be included with the headings: Objectives, Design, Methods, Results, Conclusions. Review articles should use these headings: Purpose, Methods, Results, Conclusions.
- All Articles must include Practitioner Points – these are 2-4 bullet points, in addition to the abstract, with the heading 'Practitioner Points'. These should briefly and clearly outline the relevance of your research to professional practice.

- For reference citations, please use APA style. Particular care should be taken to ensure that references are accurate and complete. Give all journal titles in full and provide DOI numbers where possible for journal articles.
- SI units must be used for all measurements, rounded off to practical values if appropriate, with the imperial equivalent in parentheses.
- In normal circumstances, effect size should be incorporated.
- Authors are requested to avoid the use of sexist language.
- Authors are responsible for acquiring written permission to publish lengthy quotations, illustrations, etc. for which they do not own copyright.
- Manuscripts describing clinical trials must be submitted in accordance with the CONSORT statement on reporting randomised controlled trials (<http://www.consort-statement.org>).
- Manuscripts describing systematic reviews and meta-analyses must be submitted in accordance with the PRISMA statement on reporting systematic reviews and meta-analyses (<http://www.prisma-statement.org>).

Appendix 7 - Ethical Approval confirmation

Lothian NHS Board

South East Scotland Research Ethics Committee 01



Waverley Gate
2-4 Waterloo Place
Edinburgh
EH1 3EG
Telephone 0131 536 9000

www.nhslothian.scot.nhs.uk

26 April 2017

Date 26 April 2017
Your Ref
Our Ref

Ms Alison C Reddish
Trainee Clinical Psychologist
NHS Grampian
Royal Cornhill Hospital
Cornhill Road
Aberdeen
AB25 2ZH

Enquiries to: Sandra Wyllie
Extension: 35473
Direct Line: 0131 465 5473
Email: Sandra.Wyllie@nhslothian.scot.nhs.uk

Dear Ms Reddish

Study title: What are the psychological needs of women experiencing distress during pregnancy: an exploration of women's experiences through their voices.
REC reference: 17/SS/0030
IRAS project ID: 213728

Thank you for your letter of 11 April 2017, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

We plan to publish your research summary wording for the above study on the HRA website, together with your contact details. Publication will be no earlier than three months from the date of this opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to make a request to postpone publication, please contact hra.studyregistration@nhs.net outlining the reasons for your request.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Conditions of the favourable opinion

The REC favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission must be obtained from each host organisation prior to the start of the study at the site concerned.



Headquarters
Waverley Gate, 2-4 Waterloo Place, Edinburgh EH1 3EG

Chair Mr Brian Houston
Chief Executive Tim Davison
Lothian NHS Board is the common name of Lothian Health Board

Management permission should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements. Each NHS organisation must confirm through the signing of agreements and/or other documents that it has given permission for the research to proceed (except where explicitly specified otherwise).

Guidance on applying for NHS permission for research is available in the Integrated Research Application System, www.hra.nhs.uk or at <http://www.rdforum.nhs.uk>.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of management permissions from host organisations

Registration of Clinical Trials

All clinical trials (defined as the first four categories on the IRAS filter page) must be registered on a publically accessible database within 6 weeks of recruitment of the first participant (for medical device studies, within the timeline determined by the current registration and publication trees).

There is no requirement to separately notify the REC but you should do so at the earliest opportunity e.g. when submitting an amendment. We will audit the registration details as part of the annual progress reporting process.

To ensure transparency in research, we strongly recommend that all research is registered but for non-clinical trials this is not currently mandatory.

If a sponsor wishes to request a deferral for study registration within the required timeframe, they should contact hra.studyregistration@nhs.net. The expectation is that all clinical trials will be registered, however, in exceptional circumstances non registration may be permissible with prior agreement from the HRA. Guidance on where to register is provided on the HRA website.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Ethical review of research sites

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Covering letter on headed paper		
GP/consultant information sheets or letters [Letter to GP to inform of participation]	Version 1	19 December 2016
Interview schedules or topic guides for participants [Interview Schedule]	Version 1	24 January 2017
Other [Project Participant Debrief Sheet]	version 2	11 March 2017
Participant consent form [Consent Form]	version 2	11 March 2017
Participant information sheet (PIS) [PIS]	version 2	
REC Application Form [REC_Form_13022017]		13 February 2017
Research protocol or project proposal [Study Protocol]	version 2	
Summary CV for Chief Investigator (CI) [CV for Chief Investigator]	Version 1	12 February 2017
Summary CV for supervisor (student research) [Summary CV for Dr Angus MacBeth]	Version 1	12 February 2017

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document "*After ethical review – guidance for researchers*" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The HRA website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

User Feedback

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website: <http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/>

HRA Training

We are pleased to welcome researchers and R&D staff at our training days – see details at <http://www.hra.nhs.uk/hra-training/>

17/SS/0030	Please quote this number on all correspondence
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With the Committee's best wishes for the success of this project.

Yours sincerely

Mrs Christine Beadle
Vice Chair

Email: sandra.wyllie@nhslothian.scot.nhs.uk

Enclosures: "After ethical review – guidance for researchers"

Copy to: *Ms Charlotte Smith*
Mrs Louise Milne, NHS Grampian

Appendix 8 - Local Research and Development Department Approval

Research and Development

Foresterhill House Annexe
Foresterhill
ABERDEEN
AB25 2ZB



Ms Alison Reddish
NHS Grampian
Royal Cornhill Hospital
Aberdeen
AB25 2ZH

Date 03/05/2017
Project No 2017PC002
Enquiries to
Extension 53846
Direct Line 01224 553846
Email grampian.randdpermissions@nhs.net

Dear Ms Reddish

Management Permission for Non-Commercial Research

STUDY TITLE: What are the psychological needs of women experiencing distress during pregnancy: an exploration of women's experiences through their voices

PROTOCOL NO: V2; 22.3.17
REC REF: 17/SS/0030
NRS REF: n/a

Thank you very much for sending all relevant documentation. I am pleased to confirm that the project is now registered with the NHS Grampian Research & Development Office. The project now has R & D Management Permission to proceed locally. This is based on the documents received from yourself and the relevant Approvals being in place.

All research with an NHS element is subject to the Research Governance Framework for Health and Community Care (2006, 2nd edition), and as Chief or Principal Investigator you should be fully committed to your responsibilities associated with this.

R&D Permission is granted on condition that:

- 1) **The R&D Office will be notified and any relevant documents forwarded to us if any of the following occur:**
 - Any Serious Breaches in Grampian (Please forward to [\[redacted\]](#))
 - A change of Principal Investigator in Grampian or Chief Investigator.
 - Any change to funding or any additional funding
- 2) **The R&D Office will be notified when the study ends.**
- 3) **The Sponsor will notify all amendments to the relevant National Co-ordinating centre. For single centre studies, amendments should be notified to the R&D office directly.**

We hope the project goes well, and if you need any help or advice relating to your R&D Management Permission, please do not hesitate to contact the office.

Yours sincerely

Susan Ridge
Non-Commercial Manager

cc: CI/Sponsor
Research Monitor

Sponsor: University of Edinburgh



Project information sheet - What are the psychological needs of women experiencing distress during pregnancy: an exploration of women's experiences through their voices.

V3 3.7.17

Thank you for your interest in my project.

One of the people who works with you from the Perinatal service will have told you about my study and provided you with this information sheet. Taking part in the study is voluntary.

Who is carrying out the research?

I am a trainee clinical psychologist studying at the University of Edinburgh and working for NHS Grampian. As part of my training I have to complete a research project and I will be completing my project with the Perinatal Mental Health service in NHS Grampian.

What is the study about?

The aim of my study is to try and find out what psychological needs women have when they are experiencing difficulties with their mental health during pregnancy. There has been previous research looking at areas like post-natal depression and women's experience of using services, however, I would like to find out more about your experiences. I hope that finding out what it is like for women at this time in your own words, might give us a better idea of what can be helpful and that can help us shape future services to meet the needs women have.

Why have I been invited to take part?

You have been invited to take part because a member of the perinatal mental health team who works with you thinks that you might be interested in participating and knows that I am looking to speak to women **who are or have been experiencing difficulties with their mental health during pregnancy**. Your clinician has spoken to you about this project so has given you this information sheet to tell you more about the project.

Do I have to take part?

No, participation in the study is completely voluntarily, you do not have to take part. Your decision about whether or not you participate will not have any influence on the care you receive from any part of NHS Grampian. If you do decide to participate you can choose to withdraw from the study at any time until the information you provided is anonymised, as explained below. At this point it would not be possible to remove your information from the study.

What will taking part involve?

I plan to do this by carrying out interviews. The interviews will take place at the Health village on Frederick Street and other NHS Grampian community facilities. If you are interested in participating then please either contact me by the email address listed below or complete the attached opt-in slip, this can be returned via freepost. I will then contact you to organise a time and date that is suitable for us to meet up - this will be within 1-2 weeks of you confirming your interest. When we meet I will let you know more about taking part and let you decide whether or not you want to consent to participating. If you decide that you think you would like to participate then I will ask you to read and sign a consent form. The interviews will last between 45 minutes to an hour and I will record them using digital recorders. I will ask you some questions and give you the chance to tell me what your experience has been like. After the interview is finished I will download the recording on to an NHS Grampian computer and I will type out all of what is discussed in the recording. Once I have done this I will delete the recording from the recorder. All the information from the recording will be kept confidential and secure in NHS Grampian property and at this point I will remove your personal details (e.g. your name) so your interview will be anonymised and not be linked to you. I will not discuss the content of your interview with any members of the perinatal team or your GP, but with your consent I will tell them that you have participated in this study. The only time I would have to tell someone about anything you have told me would be if I was worried about you or someone else coming to some form of harm. If this was the case I would discuss this with you and I would have to let your GP or member of the Perinatal Mental Health team know.

What are the possible disadvantages of taking part?

There are no known risks to taking part in this research. However, at times during the interview it may be that we discuss experiences that are of a sensitive nature or that things we talk about cause you to think about difficult times in your life. It could be the case that talking about such things may lead to you feeling upset or distressed. You can take a break or choose to stop the interview at any time. If I am concerned that you appear to be distressed, then I will ask you if you would like to take a break. If you decide to take a break we will do so and I will then check with you if you wish to continue or if

you would prefer to stop the interview completely. Either at that time, or at the end of the interview, we will talk about how you are feeling and whether or not you feel that you may require some additional support. I will also give you an information sheet with details of organisations that provide support.

If you tell me about something that makes me worried that you or someone else (an adult or a child) could be at risk of coming to some form of harm, then I would have to tell someone about it. This may be your GP, a member of the perinatal mental health team or another relevant health professional depending on the nature of what is disclosed. If this occurred, I would discuss it with you and explain the steps that I would then take.

At the end of the interview we will spend some time discussing how you are feeling and I will provide you with an information sheet about support available. If you require any further support afterwards then we can discuss contacting your clinician from the perinatal mental health service and other options that are available.

In the unlikely event that something goes wrong and you are harmed during the research and this is due to someone's negligence then you may have grounds for a legal action for compensation against the NHS, but you may have to pay your legal costs. The normal National Health Service complaints mechanisms will still be available to you (if appropriate).

What are the possible benefits of taking part?

There are no direct benefits to taking part in this study, however participating will give you the opportunity to tell your story in your own words. The information gathered from the study may help other women in similar situations as yourself by influencing future service development.

What will happen with the information collected?

I will use the information from all the interviews I have conducted and will try to work out if there are similar themes or differences in people's experiences. I will then write the analysis up as part of my overall project. I may include some direct quotes from interviews, but I will not include any names or information that could lead to people identifying you. If you would like to hear about the results of the research I will provide the perinatal team with the results and they can pass it on to you.

My project will be submitted as part of my university thesis and will also be shared through conferences and scientific journals. I also intend to share my findings with other women who have similar experiences via service users/experts by experience networks. Again for all of these purposes all the

information included from the interviews will be anonymised, no names or identifiable information will be included.

Who has reviewed the study?

This study has been reviewed by, The University of Edinburgh and NHS Grampian. All research in the NHS is looked at by an independent group of people, called a Research Ethics Committee. A favourable ethical opinion has been obtained from the South East Scotland Research Ethics Committee 1. NHS management approval has also been obtained.

How do I take part in this study?

If you are interested in participating in this study or would like to find out more then please register your interest by contacting the researcher via email areddish@nhs.net or by returning the attached opt-in slip via freepost. You will then be contacted by the researcher to answer any questions that you have or to arrange a time to meet to possibly participate in the interview, as described previously.

If you have any further questions about the study please contact:

Alison Reddish
Trainee Clinical Psychologist
Royal Cornhill Hospital
Cornhill Road
Aberdeen
AB25 2ZH
0345 456 6000

or

Dr Angus MacBeth
Academic Supervisor
Lecturer in Clinical Psychology
Honorary Principal Clinical Psychologist
Department of Clinical and Health Psychology
School of Health in Social Science
The University of Edinburgh
Rm 3.06A
Doorway 6, Medical Quad
Teviot Place
Edinburgh, EH8 9AG
0131 650 3893

If you would like to discuss this study with someone independent of the study please contact:

Dr Ken MacMahon
Senior Lecturer in Clinical Psychology
The School of Health in Social Science
Room 3.06A
Doorway 6
Medical School
Teviot Place
Edinburgh
EH8 9AG
0131 652 3932

If you wish to make a complaint about the study please contact:

The University of Edinburgh's Research Governance team via email at resgov@accord.scot

[Or NHS Grampian's complaint service via the details below](#)

NHS Grampian Feedback Service
Summerfield House
2 Eday Road
Aberdeen, AB15 6RE
Tel - 0345 337 6338
E-mail - nhsgrampian.feedback@nhs.net

Thank you for your interest in my research.



Opt in sheet - What are the psychological needs of women experiencing distress during pregnancy: an exploration of women's experiences through their voices.

V1 27/3/17

If you are interested in possibly participating in the above project, then please either contact the researcher by email or complete and return this opt-in slip.

Please initial the box to confirm that you have read the project information sheet provided by your clinician from the Perinatal Mental Health team and would like to register your interest in possibly participating in the project described.

Please initial the box to confirm that you are happy to be contacted by the researcher as described in the project information sheet.

Please circle the way you would prefer to be contacted by the researcher:

Email Telephone

Please provide your contact details below-

Name:

Address:

Telephone number:

Email Address:

Please return this opt-in slip to the following address via the prepaid envelope provided.

FAO Alison Reddish Trainee Clinical Psychologist, The department of Clinical and Counselling Psychology, Block A, Royal Cornhill Hospital, Cornhill Road, Aberdeen AB25 2ZH.

Or contact the researcher by email on –

On receiving your email or opt-in slip the researcher will contact you by your preferred method to organise a time and date for the possible interview to take place.

Thank you for your interest in this research.

Appendix 11 – Consent Form



Project Consent form - Version 3 4th July 2017

What are the psychological needs of women experiencing distress during pregnancy: an exploration of women's experiences through their voices.

This form is aimed at providing you with the additional information you need to decide whether or not you wish to consent to take part in this study. At this point you may wish to take another opportunity to re-read the information sheet provided.

Once you have had the opportunity to read this form and have any questions you wish answered, please initial the boxes if you agree with the statements and wish to participate in the study.

Please
write
initials
in each
box

I confirm that I have read the information sheet (Version 3 3.7.17) provided and have had the opportunity to consider this information and have any questions answered.

I understand that my participation in this study is voluntary and that I have the right to withdraw any time and this will not affect my future healthcare or legal rights.

I know that I have the right to ask for the information I provide to be withdrawn from the study at any time until the information is anonymised.

I consent to my interview being recorded and to the recording being stored on NHS Grampian secure network. I know that the audio recording will be deleted from the digital recording once it has been downloaded to the secure NHS Grampian network.

I understand that I have the right to choose not to answer any questions that are asked and that I can decide what information to disclose.

I understand that any personal details such as this form will be kept confidential under NHS Grampian policy and that the details used in the final report will be anonymised. I give permission for direct quotes to be used on the basis that these will be anonymised.

I understand that relevant sections of my medical notes and data collected during the study may be looked at by individuals from the regulatory authorities and from the sponsor (University of Edinburgh) or from the/other NHS Board where it is relevant to my taking part in this research. I give permission for those individuals to have access to my records.

I understand that if I do or say something during the study that causes the researcher to become concerned for my safety or for the safety of others, they will

be required to breach confidentiality and report these concerns to the relevant professional (e.g. my GP, my clinician from the perinatal mental health team).

I agree to my anonymised data being stored on the Edinburgh Research Archive for 10 years. After 10 years this status will be reviewed. I consent to my anonymous data being used for the purpose of future projects for the public good.

I give consent for my GP and my clinician from the Perinatal Mental Health service to be made aware that I have participated in this study.

I agree to participate in this study

By signing this form, I consent to participate in this study. I confirm that I have read and understood the information above and on the information sheet provided. I have been provided with a copy of the information sheet which I can keep.

Participants name printed Participants signature Date

Name of person taking consent Signature Date

*Original (x1) to be retained in study file. Copy (x1) to be included in patient notes.
Copy (x1) to be retained by the participant.*

Appendix 12 – Interview Schedule



Draft interview schedule version 1 24.1.17-What are the psychological needs of women experiencing distress during pregnancy: an exploration of women’s experiences through their voices.

To be used as points for discussion rather than direct questions, to be guided by what the participant asks- not all questions will be required for all participants depending on what they bring to the interview. Prompts to be used where appropriate as per IPA interview methodology and additional questions may be asked.

- Tell me your story?
- Tell me about your experience with your mental health since you’ve been pregnant, what’s it been like for you?
- How has pregnancy impacted on your mental health?
- What are your thoughts about stigma? Has this impacted on you?
- Do you talk to others about this? Who?
- Perinatal service? How did you become involved with the service?
 - tell me about your experience with perinatal mental health services?
- What has helped/hasn’t helped?
- What advice would you give to someone feeling a similar way?
- is there anything else you would like to talk about or tell me about?

Appendix 14 – Research Proposal



Doctorate in Clinical Psychology

Thesis Research Proposal (Research 1 Assessment)

This form should be completed and submitted as the assessment for Research 1. It will then be reviewed by a member of the academic team and will receive a grade and detailed feedback. The feedback will include an evaluation of the viability of the project and any recommendations. If there are significant concerns about viability, the project will be flagged to the research director and the research committee will decide whether the project can proceed in its current form.

Exam Number
B082215

Provisional Thesis Title
What are the psychological needs of women experiencing distress during pregnancy: an exploration of women's experiences through their voices.

Proposed Setting
NHS Grampian – Perinatal Mental Health Service

Allocated Thesis Project Supervisors	
<i>Clinical</i>	Dr Fiona Smith
<i>Academic 1</i>	Dr Angus MacBeth
<i>Academic 2</i>	
<i>Others Involved</i>	Perinatal Mental Health Service NHS Grampian (Dr Selena Gleadow-Ware, Consultant Psychiatrist; Service Lead)

Anticipated Month / Year of Submission
Must be final year for full-time trainees. For flex trainees, the month and year of submission will depend on the individual Training and Development Plan. Trainees from 2011 intake onwards must submit in May. Trainees who started in 2010 or earlier are advised to submit in May to reduce potential for HCPC registration difficulties.
May 2018

Please Note: Whilst this is not an ethics review process, where questions have some similarities to questions contained in the NHS IRAS Research Ethics form, the corresponding IRAS question numbers are given in parentheses. This is intended to facilitate completion of NHS ethics where such approval is needed.

Section 1: Introduction
1.1 Provide a brief critical review of relevant literature, which should clearly demonstrate the rationale and scientific justification for the research
1000 – 1500 words
<i>Relevant to IRAS A12</i>

Perinatal mental health in the U.K.

The mental wellbeing of women during the perinatal period (pregnancy to 1 year post birth) is increasingly discussed and considered within national policy (Early years Framework 2008) (NICE Guideline 45 2007) (Perinatal Mental Health Curricular Framework 2006). The Scottish government has highlighted the importance of promoting wellbeing during pregnancy and in the early years, throughout a range of policies including the mental health strategy, Getting it Right For Every Child and the Early Years Framework. Specifically, the importance of effective antenatal, maternity and postnatal care is highlighted with an emphasis on the requirement for these services to meet “individual needs”, be person centred and effective (Early years framework 2008) (A refreshed framework for maternity care in Scotland 2011). Experiencing difficulty with mental health during the perinatal period is relatively common with depression and anxiety affecting 10-15 out of every 100 women during pregnancy (Heron et al 2004 & Bennett et al 2004). Increases in distress associated with pre-existing mental health conditions, such as OCD and eating disorders, are also noted (NICE Guideline 45 2007, SIGN Guideline 127 2012). The guidelines highlight the requirement for a specific approach to treating mental ill health during the perinatal period, providing guidance for recognition, treatment and highlighting the need for psychological approaches (NICE Guideline 45 2007). Additionally, SIGN guidelines note that suicide remains a leading cause of maternal death in the UK (SIGN Guideline 127 2012). The guidelines focus on risk factors for a range of mood disorders and anxiety as well as post-partum psychosis. Again, providing recommendations for preventing, reducing risk, detecting difficulties and treatment (SIGN 127 2012).

Current status of research

Research into perinatal mental health can be broadly split into several key areas: postnatal depression, evaluation of treatment and of services by women and staff. Research into longitudinal consequences focuses on the impact on children and is beyond the scope of this review. Generally, research remains focused on service and treatment outcomes, rather than the experience of the women themselves and understanding their needs, with an emphasis on post-natal concerns (Megnin-Viggars et al 2015). Research is often split by diagnosis such as post-natal depression, post-partum psychosis and PTSD rather than

gaining a holistic understanding of wellbeing (Glover et al 2014, Czarnocka & Slade 2000, Leahy-Warren & McCarthy 2007). The quality of research is variable (Megnin-Viggars et al 2015) A recent review highlighted this using a quality criteria, total score of 62, papers included scored from 22-48. They identified key weaknesses as: lack of clarity on inclusion/exclusion criteria, not considering data saturation, inter-rater reliability not discussed, lack of clarity on validation procedures and lack of identifying data contrary to their hypothesis (Megnin-Viggars et al 2015). It can be difficult to draw conclusions due to small sample sizes and varying cultural considerations, possibly caused by research across countries.

Themes from women's experience of treatment and services

Throughout the literature key themes emerge in women's experience of services/treatment. These include: feeling unable to disclose their feelings, feeling that family and/or staff fail to respond to emotional/practical needs, difficulty distinguishing between normal adjustment and difficulties with mental health and the role of internal/external stigma (Dennis & Chung-Lee 2006 & Edwards & Timmons 2009). The impact of stigma is widespread with women reporting resulting isolation, changes in relationships and delays accessing treatment (Edwards & Timmons 2009). Women fear judgement by professionals, with worries that disclosing symptoms results in negative views of their ability to parent (McCauley et al 2011). Focusing solely on service and treatment outcomes results in a lack of considering underlying needs that may be present. Therefore, service development will be merely based on improving existing service models not on understanding the needs of people who access services. Again, there is a gap in the literature in understanding how women feel during pregnancy and what they highlight as important to their wellbeing.

Themes from staff perspective

Key themes emerging from the views of staff are similar to those of women. McCauley et al (2011) identified a need for increased education, training and knowledge of services for midwives. There is an acknowledgement of the need for support to help mothers adjust or

cope with the transition to pregnancy and parenthood. A need for staff to have further knowledge was consistently highlighted (Rothera & Oates 2008, Wai-Wan et al 2008 & McCauley et al 2011). Knowledge and support through the adjustment to pregnancy/parenthood would fit more with understanding the needs of women, replacing the more traditional diagnostic focus of services.

Focus on post-natal difficulties

Within the literature, there is a focus on post-natal difficulties, specifically post-natal depression. Often where wellbeing antenatally is researched it is with reference to the impact postnatally rather than attempting to understand needs during pregnancy (Heron et al 2004). The need for more research in antenatal mental health was furthered by findings from a review of treatment for antenatal depression highlighting the gap in research on psychological approaches to treating antenatal depression (Dennis et al 2007).

A recent systematic review highlighted a need for research not solely focused on the post-natal wellbeing of women, instead exploring antenatal mental health (Megnin-Viggars et al 2015). This shows the requirement for a greater understanding of the wellbeing during pregnancy. A focus purely on the postnatal period results in services that are reactive to difficulties, rather than proactive in meeting needs.

Complex difficulties

In contrast, there is less research on moderate-severe/complex perinatal mental health difficulties. Much of the research focuses on impact on the child and evaluation of biological treatment (Doucet et al 2011). When reviewing the literature using the search terms 'moderate', 'severe' and 'complex' 'perinatal mental health difficulties' most of the results returned discuss social factors such as gender based violence and poverty, rather than women's experiences and understanding of their difficulties. There are studies that consider the effectiveness of psychological treatments for post-natal depression that includes moderate-severe depression; however these are outcome based with a focus on the effectiveness of treatment rather than understanding needs (Denis & Hodnett 2007).

There is interest in Post-traumatic stress following childbirth, however again understanding needs during the antenatal period are not considered with much of the research examining predictors and prevalence of PTSD symptomatology (Olde et al 2006, Czarnocka & Slade 2000). Several qualitative studies have been published on women's experience of postpartum psychosis (Glover et al 2014, Robertson et al 2003 & Engqvist et al 2011). Glover et al (2014) identified themes including the role of negative emotions experienced antenatally, stigma, healthcare professionals unable to address psychological needs and a need for information (Glover et al 2014). They echoed sentiment that further qualitative research examining women's experience is required. The findings relating to emotions experienced antenatally suggest a need for further examination of women's experiences during pregnancy (Glover et al 2014). There is evidence that mothers with schizophrenia may be more vulnerable to difficulties during pregnancy and the quality of support will influence outcomes (WaiWan2008). As highlighted throughout this review, again, research into complex difficulties remains split by diagnostic categories and is often outcome based rather than exploring women's needs at this time, aside from the beginnings of examining women's experience during post-partum psychosis. As with perinatal research in general, research on psychosis predominantly examines the post-natal period, rather than attempting to gain an understanding of the unmet antenatal needs. This could result in services that are more reactive to difficulties.

Parent's needs considered

Research has begun to emerge highlighting the requirement of considering the needs of parents during the perinatal period in the transition to parenthood (Deave et al 2008). Deave et al report that perinatal services are not focused on preparing parents for changes and transitions, such as changes in relationships or in themselves, and are time limited, however adjusting to parenthood is not (Deave et al 2008). This raises the importance of considering the needs of parents in relation to their wellbeing rather than their experience of services, which may not fit their needs. Recent guidelines from NHS England's IAPT service emphasises the importance of women's psychological needs without giving a clear explanation of what these needs are (Perinatal Positive Practice guide IAPT NHS England 2013). This further underscores the need for research in this area to improve our

understanding of psychological needs during pregnancy.

Gaps in the research and moving forward

As discussed current research frequently references psychological needs, or needs, of women during the perinatal period; however, despite this, needs are not defined or explained. Understanding the lived experience of women during pregnancy and attempting to discover psychological needs would allow the development of services and supports to meet these needs, rather than services based on a traditional medical model of diagnosis and treatment. An understanding of these needs could result in antenatal services aimed at meeting the psychological needs of women as well as the traditional needs they meet. This current project will explore women's experiences of wellbeing throughout pregnancy and develop an understanding of their psychological needs based on their lived experience.

Word count 1498

Section 2: Research Questions / Objectives

2.1 What is the principal research question / objective?

IRAS A10

Research Question: What are the psychological needs of women attending perinatal mental health services and experiencing distress during pregnancy?

2.2 What are the secondary research questions / objectives, if applicable?

Keep these focused and concise, with a maximum of 5 research questions

IRAS A11

Secondary question: what are the expectations of women attending perinatal services of pregnancy and wellbeing during pregnancy?

What are the barriers to optimal care?

Section 3: Methodology

3.1 Give a full summary of your design and methodology

It should be clear exactly what will happen at each stage of the project

IRAS A13

Design

The project will utilise an Interpretative Phenomenological Analysis (IPA) approach. The purpose of this project is to explore the experience of the aforementioned population; therefore IPA will be used due to its focus on exploring how people make sense of their experience. IPA has an underlying epistemological position of contextualism (Smith et al 2009), with a focus on clarifying and gaining information through participants' experiences and the meanings they develop from these.

There is a focus on the interpretative process that also considers the role of the researcher and the influence they can have on interpreting the results. This forms part of the dual interpretative process IPA is centred around; both of the researcher making sense of participant's experiences and the acknowledgement of the active role of the researcher in this process. Part of an IPA design is keeping the research question framed broadly and openly without a preset hypothesis to test.

Ethical approval

Ethical approval will be sought via North East of Scotland Research Ethics and the University of Edinburgh.

Recruitment

Recruitment will take place via the perinatal mental health service. Links have already been made with the service, via the medical lead who has provided support at a service level. Clinicians will consider the recruitment of participants during contact with anyone accessing the service who meets the inclusion criteria.

The medical lead for the service Dr Selena Gleadow-Ware has provided service level endorsement of the project.

Staff will provide individuals with an information form and ask if they wish to participate. The researcher will meet with interested participants to provide them with further information and seek to obtain consent. Interviews would be organised to take place during the study day of the researcher, with efforts to be flexible where possible. An additional option to encourage recruitment is for the researcher to attend the perinatal mental health clinic on occasion to meet with possible participants and provide information. There will be further liaison with the service to consider their ways of working when finalising the recruitment process, to identify any possible barriers and ensure staff from the team have adequate information about the purpose of the project.

Data Collection

When selecting locations for interviews suitability of location for participants will be considered. The use of home visits would be less preferable as the researcher will be working alone and therefore risk assessments for lone working would be required. This may

also be less acceptable to participants as the perinatal service use clinic based appointments rather than home visits. The interviews will be grouped together in local areas and bookable rooms within NHS buildings in each area utilised. Interviews will be conducted 1:1 with the researcher. Further information would be provided and consent for participation confirmed via signing of consent forms. Interviews would take approximately 1-1.5 hours and would be recorded using an electronic recorder. The interviews will be conducted in a semi-structured manner making use of a pre-devised schedule to guide the interview process and ensure key themes are discussed. After each interviewer the researcher will write a brief reflective summary to aid in the analysis. Participants will be given the option to receive information about the results of the study. Following this all audio files will be downloaded and backed up on to NHS Grampian computer system. Audio files will be transcribed and then anonymised using an anonymisation key. The anonymised transcripts will be transferred and archived on the University of Edinburgh network using a SFTP transfer. Only the researcher and supervisors would be able to access these. Analysis will then be completed as discussed in the analysis section of this proposal.

3.2.1 In which aspects of the research process have you actively involved, or will you involve, patients, service users and/or their carers or members of the public?

Highlight as appropriate.

IRAS A14-1

Design of the research	Analysis of results
Management of the research	Dissemination of findings
Undertaking the research	None of the above

3.2.2 Give details of involvement, or if none, please justify the absence of involvement

Experts by experience will be consulted at several stages of the project, particularly during the design, to ensure their influence can be realised as early as possible. From the beginning of the research, a member of the Scottish Recovery Network, who specialises in perinatal mental health, will be liaised with. They will be asked to consult on the research proposal, with a focus on the lay summary. This will maximise acceptability and effectiveness of the research to service users, putting this at the forefront of the research.

Consultation will be invited again when finalising the interview schedule to ensure its acceptability to service users.

Further consultation will be sought during analysis, part of IPA approach can involve consulting to find out if the themes drawn out in the analysis reflect participants' views of their experience. Consultation at the latter stages of the research depends on availability of service users to be involved at this time or available links with other support groups to consult.

Finally involvement will be sought when disseminating findings in order to share the findings with those who it would be most relevant for. In addition to disseminating findings through academic means and clinically within local health services, a key ethos would be to ensure research reaches the wider population of those involved. Therefore it may be through contacts previously made at other stages of the research, such as the representative from the SRN, through which channels could be established to disseminate research to a wider audience.

The researcher will also have access to the Perinatal mental health research group at the University of Edinburgh that includes key stakeholders.

3.3 List the principal inclusion and exclusion criteria

IRAS A17-1 and IRAS A17-2

Inclusion criteria: women experiencing moderate - severe mental health difficulties (e.g. Bipolar disorder, Psychotic disorder, Moderate- severe depression, judged as high risk of post-partum psychosis, indicators of vulnerability) as defined by a referral to the perinatal mental health service within NHS Grampian during pregnancy (antenatal).

Exclusion criteria:

- involved in any existing known child protection concerns
- non-fluent English speakers
- anyone experiencing acute distress

IPA requires a homogenous sample therefore purposive sampling is required, as is adherence to the inclusion/exclusion criteria.

3.4 How will data be collected?

If quantitative, list proposed measures and justify the use of these measures. If qualitative, explain how data will be collected, giving reasonable detail (don't just say "by interviews".)

As per the most appropriate method of data collection when undertaking an IPA analysis: interviews will be used in this study. One-to-one semi structured interviews will be conducted using an interview schedule to ensure consistency in main points discussed. Interviews will be recorded using an encrypted electronic recorder. The interviewer may also take minimal notes and will write a reflective summary after each interview. The purpose of this would be to initiate the process of considering the role of the researcher in influencing the research process. The audio files will be downloaded and copies saved on NHS Grampian networks. A data storage plan will be followed throughout the project. Interviews will take place in locations convenient and acceptable to participants. Advice will be sought from the perinatal service and supervisors on exact locations in local NHS facilities near or whether it would be appropriate/possible to conduct interviews within the maternity hospital. Consideration will be given to individual risk assessments for lone working, travel time for both participant and researcher and ease of accessing bookable facilities.

Section 4: Sample Size

4.1 What sample size is needed for the research and how did you determine this?

For quantitative projects, outline the relevant Power calculations and the rationale for assuming given effect sizes. For qualitative projects, outline your reasoning for assuming that this sample size will be sufficient to address the study's aims

IRAS A59 and IRAS A60

A suggested sample size of around 12 interviews has been suggested as an adequate amount for professional doctorate projects (Smith et al 2009). The sample size should not be larger than suggested as the process of transcribing and analysing rich data is time consuming and in order to ensure effective analysis is completed a sample size of no larger than 12 should be maintained.

4.2 Outline reasons for your confidence in being able to achieve a sample of at least this size

E.g. give details of size of known available sample(s), percentage of this type of sample that typically participate in such studies, opinions of relevant individuals working in that area

Information provided by perinatal mental health service within NHS Grampian highlighted that they received 393 referrals in 2015 and to date (June 2016) in 2016 have received 293 referrals. In order to achieve the desired sample size that would only require recruitment of 1 participant per month over the 12 month allocated for recruitment. The medical lead for the perinatal mental health service Dr Selena Gleadow-Ware has provided service level endorsement of the project and links with the service have already been established. Building and maintaining relationships within the perinatal service along with using the expertise from the SRN in engaging with participants will also be key to recruiting the required sample size.

Section 5: Analysis

5.1 Describe the methods of analysis (statistical or other appropriate methods, e.g. for qualitative methods) by which the data will be evaluated to meet the study objectives

IRAS A62

IPA – was selected due to the focus on understanding the experiences of participants.

IPA analysis involves both attempting to understand the participants' experience and the meanings they construct from their experience, as well as considering a critical overview of any themes emerging from the overall analysis. Detailed in depth analysis of each transcript will be required as well as the consideration of overall themes and the influence the researcher may have had on all of these. The main aim of the IPA analysis is to try to understand the meanings participants link to their experiences and to try to make sense of the underlying factors influencing these. The recordings will be transcribed verbatim and

then each read several times by the researcher. IPA analysis does not require a specific type of comment to be made when transcribing, instead it is up to the researcher to interpret which sections of the interview require more in depth analysis and to comment on these. Themes will then be identified within individual transcripts, these themes will then be examined with an attempt to identify connections and clusters of themes. During this process, actual quotations from participants that match with the themes will be highlighted. The themes from each interview will be considered during further analysis and will allow patterns or differences between interviews to be identified. Finally, once all the interviews are analysed and overarching themes identified an overall statement of meaning, a narrative account, will be drawn up based on these themes. This will meet the project objectives to understand the experience of women during the perinatal period.

Section 6: Project Management / Timetable

6.1 Outline a timetable for completion of key stages of the project

E.g. ethics submission, start and end of data collection, data analysis, completion of systematic review

See Gantt chart below for a timeline of key stages of the project.

Timescale	2016				2017						2018			
	July	August-September	September-October	November-December	January-February	March-April	May-June	July-August	September-October	November-December	January-February	March-April	May	June
Reading														
Submit thesis proposal	█													
Consult with SRN														
Liaise with perinatal team		█	█	█	█	█	█	█	█	█	█	█	█	█
Complete NHS ethics proposal		█	█											
Project setup			█	█										
Data collection					█	█	█	█	█	█	█	█	█	█
Analyse data								█	█	█	█	█	█	█
Systematic review				█	█	█	█	█	█	█	█	█	█	█
Write up									█	█	█	█	█	█

Section 7: Management of Risks to Project

7.1 Summarise the main potential risks to your study, the perceived likelihood of occurrence of these risks and any steps you will or have taken to reduce these risks. Outline how you will respond to identified risks if they should occur

Risks to project:

- Recruitment issues – difficulties achieving required sample size. Although difficulties recruiting would have a high impact on the project, they are less likely to occur due to the links made with the perinatal service, support from the medical lead and the sample size required compared with the referral rate. Consulting with service users during the design process will result in a clear focus on acceptability to participants throughout the research, which may encourage participation. Maintaining good relationships with the perinatal team throughout the process is vital, but will also result in knowledge of issues with recruitment as early as possible and could be a way of identifying barriers to recruitment. An additional option to assist with recruitment, if issues occur, would be for the researcher to attend perinatal mental health clinics and speak to possible participants to explain the rationale of research and encourage participation.
- Interview questions not appropriate - There is a risk that the questions in the interview schedule are not accessible to participants. Attempts to reduce the likelihood of this occurring will involve service users consultation on the interview schedule. Another key factor will be during the interview process the researcher ensuring that developing rapport and helping participants to feel comfortable throughout are forefront in the mind of the researcher.
- Possibility of either supervisors leaving – Although this is a risk to the project, it is not likely to occur. A clear and detailed proposal, clear plans throughout the process and good relationships with supervisors and stakeholders in the project would facilitate the transition to a new supervisor in a less disruptive way, if

required.

- Developing competencies in qualitative research – A hypothesised risk to the project could be that the researcher is in the process of developing competencies in qualitative research and has not facilitated interviews of this kind before. To combat this risk the researcher will practice mock interviews with colleagues to increase confidence and familiarity with schedule. If possible a mock interview will also be conducted with a friend/colleague who is pregnant. The researcher has previous experience facilitating small focus groups; skills from this process can be drawn on to increase effectiveness of interviews. The researcher will also research the qualities and skills required to facilitate interviews effectively to ensure a good understanding of what is required throughout the process.

- Child protection issues raised during interview process – There is a risk that child protection concerns are identified during interviews. The researcher will make participants aware of standard confidentiality rules, as applied in NHS Grampian, that if there are any concerns re risk of harm to the participant or others, they would have to break confidentiality. The researcher, through guidance from the perinatal service and field supervisor, will have a clear understanding of the NHS Grampian process for reporting and recording child protection concerns. If required this process would be enacted. Copies of the procedure and details or relevant contacts would be taken to each interview so procedure could be immediately enacted. Arrangements would be made so that either a supervisor or clinician within the perinatal service could be contacted for advice if required. The researcher has already completed the required child protection training within NHS Grampian.

- Loss of data- The loss of data would have a massive impact on this project; therefore steps will be taken from the outset to reduce the likelihood of this occurring. A clear process of data management will be followed to ensure data is correctly stored. Any paper copies of notes will be scanned and kept electronically. As described in detail in previous sections, versions of transcripts will be saved on

both NHS Grampian networks (original transcripts) and the University of Edinburgh network (anonymised version) and these files will be archived. Therefore the data will be saved in a range of secure systems.

Section 8: Knowledge Exchange

8.1 How do you intend to report and disseminate the results of the study?

IRAS A51

The results will be published within a doctoral thesis for submission as part of the Doctorate in Clinical Psychology for the University of Edinburgh. The journal article section will be submitted to peer reviewed journals for possible publication at a wider level. The most appropriate journals would be identified following further consultation with both supervisors. In order to disseminate the results locally, and benefit the stakeholders within NHS Grampian more directly, dissemination will also occur via local networks, such as the perinatal mental health network. The field supervisor and the perinatal mental health service will be consulted on the best ways to disseminate findings locally. As stated previously, it would also be an aim of this project to disseminate research to the wider population of service users this study focuses on. Links made throughout the consultation process could facilitate this, for further detail see section on service user involvement.

8.2 What are the anticipated benefits or implications of the project?

E.g. if this is an NHS project, in what way(s) is the project intended to benefit the NHS?

It is hoped that this project would benefit the NHS both at a local level and at a national level. The main aim of the project is to gain a better understanding of the needs of women experiencing mental distress during the perinatal period. This would enable services to consider needs during service design and to develop more effective services, suited to the needs of the people who use them. This would result in better quality, person-centred services with more efficient use of funds. It is hoped that this could further inform policy on this area. As discussed perinatal mental health is an area of focus for the Scottish Government, as seen in the early years framework and highlighted in GIRFEC, and a better understanding of the needs of women during this time could provide additional information

for future policy as well as to highlights areas for further research.

8.3 Are there any potential costs for the project?

Outline any potential financial costs to the project, including the justification for the costs (why are these necessary for the research project?) and how funding will be obtained for these costs (how will they be met?) Please separate these into potential costs for the University and potential costs for your NHS Board and note that you should ask your NHS Board to meet stationery, printing, postage and travel costs.

Costs include minimal cost to allow printing of consent forms, information sheets and copies of interview schedules. It is thought that this would not require more than one packet of A4 paper costing approximately £3-£5. University guidelines suggest that funding for these sorts of items should be sought locally within the NHS if possible. Further advice will be sought within NHS Grampian and with supervisors to establish the best course of action to apply for this. Encrypted electronic recorders will be required for recording interviews. There are such recorders available within the health board for use for trainee projects. If these are not available, an encrypted recorder would be purchased costing approximately £20-35. Enquiries will be made within the health board to establish if recorders are available. Funding for this would be sought via the training support fund within NHS Grampian.

Section 9: Any Other Relevant Information

Section 10: Key References

Bennett et al (2004) Prevalence of depression during pregnancy: Systematic review. *Obstet Gynecol.*;103(6):698-709

Czarnocka J & Slade P (2000) Prevalence and predictors of post-traumatic stress symptoms

following childbirth. *British Journal of Clinical Psychology* 39, 35-51

Deave T, Johnson D & Ingram J (2008) Transition to parenthood: the needs of parents in pregnancy and early parenthood. *BMC Pregnancy and Childbirth* 8:30

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SIGN Guideline 127

Section 11: Confirmation of Supervisors' Approval

"I confirm that both my Academic and Clinical Supervisors have seen and approved this research proposal and have both completed the supervisors' appraisal forms below."

Delete as appropriate

Yes	
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Appendix 1

Main Academic Supervisor's Appraisal of Project Risk

Supervisor's Name

Dr Angus MacBeth

Date

12/07/16

Do you consider that the project should proceed in broadly its current form?

Delete as appropriate

Yes

Outline the reasons for the above response

Highlight any areas of risk to the completion of the project that have not been fully addressed within the proposal and any steps that could be taken to reduce risks

Trainee has engaged with local perinatal services and over the last 6 months has established link with key stakeholders. The perinatal mental health service in NHS Grampian is under new leadership and has a) increased referrals and b) a strategic goal towards developing local research. In this respect the trainee should be well-supported to have maximum likelihood of recruiting the projected sample.

Appendix 2

Clinical Thesis Supervisor's Appraisal of Project Risk

Supervisor's Name
Dr Fiona Smith

Position
Principal Clinical Psychologist, Department of Clinical and Counselling Psychology (Adult Mental Health) NHS Grampian

Date
19/7/16

Do you consider that the project should proceed in broadly its current form?
<i>Delete as appropriate</i>
Yes

Outline the reasons for the above response
Highlight any areas of risk to the completion of the project that have not been fully addressed within the proposal and any steps that could be taken to reduce risks
Trainee has engaged the appropriate stakeholders and there is consensus within the Perinatal Services that it is an important local and national priority to develop infrastructure in the area.

Appendix 3

Lay Summary

Provide a summary of your project in language suitable for a layperson

500 words

The aim of this project is to try and find out what the psychological needs are for women during pregnancy and, from that, to start thinking about what wellbeing is during this time. Difficulties with mental health during pregnancy and postnatally are increasingly being researched; however most of this either focuses on views of treatment, professionals views or particular conditions with an emphasis on post-natal depression rather than the wide range of difficulties that can occur. Therefore, there appears to be a gap in terms of understanding the experience of women during pregnancy from their own perspective. This project will seek to find out women's views of their experience by asking them through individual interviews. The research will be carried out with the help of the perinatal mental health service within NHS Grampian and participants will be recruited via the service. Staff from the service will be asked to help identify people who may be willing to participate in the research. For those who may be interested, staff will provide them with information about the project and seek their contact details. Individual interviews will be carried out by the main researcher using a list of themes as talking points. Around 6-12 interviews will be carried out, this number is based on advice from experts in the type of research method used. All the interviews will be recorded. After the interviews the researcher will listen to the recordings and type out what was discussed word for word. Each interview will then be analysed by the researcher who will look for common themes in what was said, bigger themes throughout all the interviews will also be identified. Overall conclusions will be made based on the findings of the interviews and will be written up by the researcher with an aim to submitting a journal article to relevant journals for publishing. The findings will also be shared via service user networks and locally within NHS Grampian. It is hoped that the results of this research will help with the development of future services. Having a greater understanding of the needs women have during the perinatal period would allow the shaping of services to try and meet those needs, hopefully resulting in more, holistic

and effective services.

At various stages throughout the project representatives of service users will be asked for their views on the idea of the project itself, the materials used such as the talking points for the interviews and the conclusions drawn from the interviews.

Word count 414