The qualitative exploration of women's experiences of anxiety during pregnancy

A thesis submitted to the University of Manchester for the degree of Doctor of Clinical Psychology in the Faculty of Biology, Medicine and Health.

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Thesis Abstract

The qualitative exploration of women's experiences of anxiety during pregnancy

Pregnancy is a time of transformation and adjustment for women, personally and socially. This can, for some, be a time of vulnerability to experiencing mental health difficulties. Anxiety is one of the most prevalent psychological difficulties during the antenatal period, however, little qualitative research has been completed to explore women's lived experiences of generalised anxiety during pregnancy and the factors which are influential. Such information is clinically important to help understand experiences of anxiety specific to pregnancy in order to tailor interventions and inform future qualitative research.

A metasynthesis was completed to explore women's experiences and descriptions of generalised anxiety during pregnancy. Six databases were systematically searched using key words to identify qualitative literature which explored antenatal anxiety, worry or 'distress' (anxiety and depression). Nine papers which met inclusion criteria were synthesised using a meta-ethnographic approach. A line of argument, 'Pregnancy is a time of emotional, social and physical uncertainty, which is impacted by loss of sense of control and feeling judged, resulting in anxiety' was identified which linked all themes across the included papers. In addition, four themes were identified*: Losing and regaining control*, *Feeling judged*, *Coping with anxiety*, and *The role of healthcare professionals and care system*. Recommendations were made to professionals working in antenatal settings and/or who support women during pregnancy. The findings and limitations were discussed with reference to the existing literature.

The empirical paper explored women's experiences of generalise anxiety whilst pregnant, using semi-structured interviews which were analysed using interpretative phenomenological analysis (IPA). Women who identified with experiencing anxiety at any stage of their pregnant were recruited through a maternity hospital or online forums. Four superordinate themes emerged from the data; *1) Adjustment to pregnancy and motherhood and the experiences of anxiety, 2) Unfamiliarity, uncertainty and uncontrollability of pregnancy influences anxiety, 3) Personal and social expectations and pressures of pregnancy and motherhood and 4) Relying on healthcare systems – the good and bad.*. Experiences of anxiety were influenced by first pregnancies and first trimesters being uncertain. Social expectations and judgements of motherhood and pregnancy increased anxieties. Antenatal professionals can relieve anxiety by validating and normalising women's emotional experiences, as well as correcting unrealistic social expectations. Findings indicate that more support earlier in pregnancy might be important for women as well as more information available regarding emotional experiences during pregnancy.

The final paper is a critique of the first and second paper. This paper discusses the rational and processes in developing and implementing both papers. Challenges during the research are highlighted. Strengths and limitations of both papers are discussed, as well as the researchers of personal reflections and learning points.

Declaration

No portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

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Paper 1

Women's Experiences of Anxiety During Pregnancy: A Meta-Synthesis

Manuscript prepared for *Midwifery*

Word count: approx. 6,871 (excluding tables, figures, references and abstract)

Full length articles and reviews, submitted to *Midwifery*, should be approximately 5,000 words in length, excluding references, tables and figures.
Submission Guidelines for *Midwifery* is presented in Appendix 1

Abstract

Objective: Anxiety is commonly experienced during pregnancy and associated with negative outcomes for mother and baby. Given that pregnancy and transitions to motherhood can influence experiences of anxiety, the current synthesis aimed to reviewing qualitative research which explored women's experiences of antenatal anxiety to provide further understandings.

Design: A meta-synthesis was conducted.

Method: The following databases were searched: MEDLINE, Maternity and Infant Care Database, PsycINFO, CINAHL, PubMed, EMBASE and Google Scholar. Inclusion criteria included women, over the age of eighteen, who experienced anxiety during pregnancy. Exclusion criteria to this study were other psychiatric diagnoses, in vitro fertilisation pregnancies and experiences related to the postnatal period. Eligible studies were synthesised using a meta-ethnographic approach.

Findings: Nine studies were identified and synthesised. Four main themes were identified*: Pregnancy - a time of uncertainty and anxiety (intrapersonal experiences), Losing and regaining control*, *Feeling judged*, *Coping with anxiety*, and *Role of healthcare professionals*. Related subthemes were also discussed. Pregnancy was a time of uncertainty and uncontrollability, particularly for primiparous women and women with pregnancy complications, leading to anxiety. Societal expectations of pregnancy and motherhood, as well as stigma regarding mental health, presented barriers to women disclosing anxiety. Relationships with healthcare systems could be supportive or anxiety provoking. '*Pregnancy is a time of emotional, social and physical uncertainty,*

which is impacted by loss of sense of control, feeling judged, and barriers to support resulting in anxiety', was identified as a line of argument which linked the four themes.

Conclusions and Implications: Experiences of anxiety were influenced by pregnancy and impacted by personal experiences, social expectations, loss of control and interactions with healthcare professionals. By enhancing to health professionals' understandings of the multiple factors influencing women's experiences of anxiety during pregnancy, this review highlights the importance of responding to anxiety in more validating and supportive ways.

Keywords: Antenatal, prenatal, mental health, generalised anxiety, meta-ethnography.

Introduction

Pregnancy is a time of transformation for women, physically, psychologically and socially. Given the significant transition to motherhood and adjustments to women's lives and identities, some level of worry and anxiety is expected during pregnancy (Desai, 2017). However, it is estimated that approximately 15% of women will experience clinical levels of generalised anxiety disorder (GAD) during pregnancy (Dennis, et al, 2017; Goodman, et al, 2014; Howard et al., 2018). Generalised anxiety is the most common mental health difficulty experienced during pregnancy (Howard, et al, 2018). Current diagnostic criteria differentiate 'normal' levels of worry from GAD as excessive non-specific worry, disproportionate to current events, which the person finds difficult to control, causing distress, and results in decreases in occupational and social functioning (The Diagnostic Statistical Manual (DSM) 5, 2013; National Collaborating Centre for Mental Health UK, 2011). Anxiety can be associated with psychosomatic symptoms, e.g. tension, restlessness, fatigue, difficulty concentrating, sleep disturbance, etc.

Is it important to note that the application of current diagnostic criteria for GAD to pregnant populations has been criticised (Misri et al, 2015). Physiologic symptoms of pregnancy resemble anxiety symptoms which complicates screening for anxiety; thus, anxiety may be masked during pregnancy (Weisberg and Paquette, 2002). Similarly, given pregnancy can trigger anxiety (Buist et al., 2011), applying DSM-5 criteria for the general population to pregnant women potentially excludes those with excessive worries for less than 6 months(Misri et al., 2015). Therefore, more research is needed to understand how antenatal generalised anxiety (AGA) is experienced in order to improve identification of women who might benefit from antenatal psychological support.

Additional pregnancy factors which can lead to uncertainty and vulnerability to both mother and baby are also important to consider when considering antenatal

anxiety. Although for most 'typical' pregnancies some level of uncertainty is expected, for some women pregnancy related risks and complications can be highly anxiety provoking (Howard et al., 2014). High risk pregnancies (Dulude et al., 2002), miscarriage (Geller et al., 2004) and previous complications and traumatic births (Beck et al., 2013) have been reported to increase the likelihood experiencing perinatal anxiety.

Although progress has been made in researching AGA, identification and screening of mental health difficulties remains a challenge. As mentioned above, difficulties in identifying anxiety during pregnancy can be attributed to current time specific diagnostic criteria (Matthey & Ross-Hamid, 2011), anxiety symptoms being overlooked or misinterpreted as 'normal' pregnancy symptoms (Weisberg & Paquette, 2002) and barriers to disclosure, such as stigma or professional uncertainty (Henderson & Redshaw, 2013). A recent meta-synthesis of 24 studies (Button et al., 2017) exploring women's experiences of barriers to help seeking for perinatal psychological distress (i.e., depression, anxiety and stress) indicated three main themes: i) *challenges identifying a problem due to not recognising symptoms or struggling to communicate them*, ii) *women unsure of the role of professionals in offering psychological support/referrals and professionals not recognising signs*, and iii) *stigma, concerns of judgments from others and women's needs to conform to a perceived ideal image of motherhood*. These themes highlight difficulties in detecting AGA which therefore pose challenges to healthcare professionals in providing appropriate and timely mental health care and potential challenges for pregnant women accessing support.

These difficulties in accessing and providing support for anxiety can lead to detrimental outcomes for both mother and infant. Clinical levels of anxiety during pregnancy have shown to be strong predictors of increased risk of postnatal mental

health difficulties (Huizink et al., 2017; Martini et al., 2015), disruptions in infant-mother attachment relationships (Condon & Corkindale, 1997), increased production of cortisol during pregnancy impacting on the neurodevelopment of the foetus (Van den Bergh, et al, 2005) and negative postnatal outcomes on the infant's psychological development (O'Connor, et al, 2002; Stein et al., 2014). Despite these findings, current understandings of AGA has been limited, relative to antenatal depression and psychosis which research has tended to focus on (Howard, et al, 2014). This tendency is perhaps due to the increased risk of suicide or harm linked to low mood and psychosis. Current AGA research has predominantly been quantitative, focusing on prevalence, course and risk factors during pregnancy, whereas a more in-depth understanding of women's lived experiences of anxiety during pregnancy is lacking. Existing qualitative research has tended to explore anxiety under the umbrella term of 'antenatal distress', which refers to depression, anxiety and stress. For example, a meta-synthesis of eight papers by Staneva, Bogossian and Wittkowski (2015) identified five core themes which related to the subjective experience of antenatal 'distress'. These themes were termed: i) *Recognising that things are not right, ii) Dealing with stigma, iii) Negotiating the transformation, iv) Spiralling down and v) Regaining control*. According to the authors, during this transition phase towards motherhood, pregnant women experienced distress which could be exacerbated by interpretations of their experiences as deviant or inadequate in comparison to perceptions of what was socially expected of pregnancy.

Although these findings offer useful insights, no review to date has attempted to synthesise qualitative data specific to the experience of anxiety during pregnancy to provide more in-depth understandings of women's experiences. Although general anxiety and depression are often comorbid presentations, conflating the two experiences under the term 'distress' might neglect certain experiences specific to antenatal anxiety that could be of clinical relevance. Without qualitative research exploring antenatal

anxiety specifically and a synthesis of such findings important information for future research or clinical practice could be overlooked. Therefore, the current paper aimed at providing insights by synthesising existing qualitative research which explored women's experiences of antenatal anxiety. Given the aforementioned difficulties with applying current diagnostic criteria as well as qualitative studies operationalising anxiety in different ways often without the need for a diagnosis, for the purpose of this study generalised antenatal anxiety was conceptualised broadly as non-specific worry/anxiety; experiences could range on a spectrum from mild to high levels of anxiety. It is important to note that whilst there is a wider literature on parenting, transition to parenthood and motherhood (e.g. Nelson, 2003; Barclay et al 1997), this was beyond the scope of the current study which focused on women's intrapersonal experiences of anxiety specifically during the pregnancy period.

Methodology

Design

A meta-synthesis was chosen because it allows for information from numerous qualitative studies to be combined to potentially offer new interpretations and improve existing knowledge of the chosen topic (Boland et al., 2017). Noblit and Hare's (1988) meta-ethnographic approach was chosen for this synthesis because it goes beyond aggregating themes and allows for the synthesis and interpretation of conceptual data in a way that transcends the findings of individual studies' accounts (Noblit & Hare, 1988). The analysis then involves creating new themes, which are compared across studies, and from which an interpretative framework (i.e., the line of argument) is generated. Meta-ethnography had been used to synthesise qualitative studies in perinatal mental health (e.g., Elmir, et al, 2010).

Search strategy

An initial scoping exercise was completed to identify relevant papers and to refine search terms. Following this exercise, the final terms were selected (see Table 1) in line with the SPIDER tool (Cooke et al., 2012). Six electronic databases were then searched in October 2017: MEDLINE, Maternity and Infant Care Database (MICD), PsycINFO, CINAHL, PubMed, EMBASE and Google Scholar. Reference lists of the papers included in the review were also manually searched to ensure comprehensive coverage.

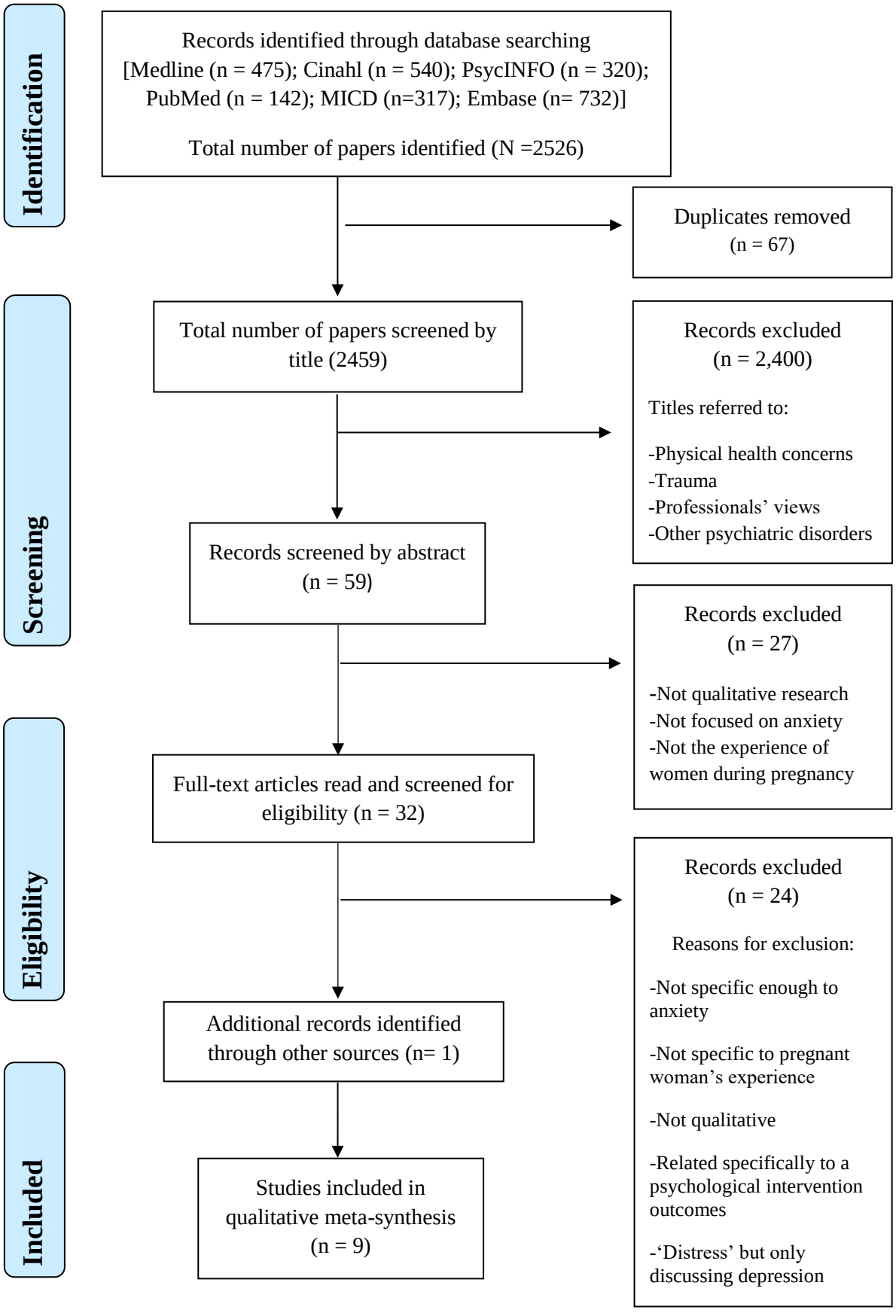
The six databases were chosen given that pregnancy, generalised anxiety and psychological research may be more aligned with medical, midwifery and psychological databases. Social science databases were not searched because it was thought these databases may be less likely to include papers which focused on anxiety akin to generalised anxiety. However, it is important to acknowledge by doing so this may have limited the transferability and breath of this synthesis as there is a possibility that this omission of social science databases may potentially also have resulted in relevant papers being missed.

The search was limited to qualitative or mixed methods studies only. Only studies published in English were included. Peer reviewed publications and grey literature were included if identified by the search and by checking the reference lists of included papers. Although arguments have been made for only including peer-reviewed research in systematic reviews (Sacks et al., 1996), others argue for the inclusion of unpublished theses (Nelson, 2002) because these might contain rich data and reduce the risk of publication bias (Beck, 2002). PRISMA guidelines of reporting systematic reviews were followed (Moher et al., 2015) and the search process is presented in a flow diagram for transparency (see Figure 1).

Table 1: SPIDER Search Terms

S(ample)	'women' AND 'over 18 of age' AND ('pregnancy' OR ‘antenatal’ OR ‘prenatal’)
P(henonmenon) of **I**(nterest)	'anxiety' OR 'worry' OR ‘generalised anxiety disorder’ OR 'distress' OR ‘stress’
D(esign)	'interviews' OR ' focus groups' OR 'case studies'
E(valuation)	'experiences' OR 'understandings' OR ‘meanings’ OR ‘beliefs’ OR ‘perception’
R(esearch type)	'qualitative' or 'mixed methods'

Figure 1 : PRISMA Flow Chart Search Strategy



Inclusion/exclusion criteria

Qualitative or mixed methods studies were included if the main phenomena of interest was anxiety or the study's topic guide clearly explored anxiety during interviews. Papers whose main focus was on other psychiatric disorders and specific anxiety disorders (e.g., post-traumatic stress disorder, obsessive compulsive disorder etc.) were excluded. Although papers which explored women's retrospective accounts of antenatal anxiety were included, studies which focused on the postnatal period specifically were excluded. Paper involving primigravida and multigravida women, during any trimester, with or without risky pregnancies or previous miscarriages were included. Papers which focused on specific physical health difficulties (e.g., diabetes, asthma, etc.) during pregnancy were not included, as any such experiences might involve illness-specific anxieties rather than more generalised anxiety. Only papers published in English were included. Papers which only included pregnant women over the age of 18 were included as it was hypothesised that due to adolescents potentially still being part of a family dynamic, the potential stigma regarding teenage pregnancy and the transition to both adulthood and motherhood, this population might have qualitatively different experiences. It was anticipated that most studies would have restricted their inclusion criteria to adult women only.

Quality appraisal

Walsh and Downe's (2006) quality appraisal checklist was used to evaluate the methodological quality of the included papers. Four key elements to determining the quality of qualitative research were assessed: credibility, transferability, dependability and confirmability (Shenton, 2004), marked with scores for present (1), partially present (0.5) and not present (0) (see Appendix 2 & 3). Scores on each item can be categorised

into grades, ranking from A (scores from 12 to 9) indicating higher quality research and low bias to C/ D (scores from 5 to 0) which indicates a lower quality paper with a high level of bias. Papers were not excluded based on their quality, because doing so forces the researcher to take a positivist approach to quality (Barbour, 2001). However, appraisals and relevant grades were presented to provide indictors of quality and additional information for the interpretation of the findings (see Appendix 3).

Reflexivity

Given the interpretive nature of this synthesis, it was important to acknowledge the authors' viewpoint and how this might inform the research process (Nightingale & Cromby, 1999). The first author, a homosexual male, with no experience of pregnancy or parenting, might have brought some naivety and an unbiased perspective when interpreting the data. The first author also acknowledged his professional and academic experience of clinical psychology which could have influenced his perspectives and understandings of anxiety. The other two researchers were women, mothers and academics with considerable experience in researching pregnancy, perinatal mental health and parenting. These different perspectives within the research team helped to offer more balanced and less biased interpretations of the findings.

Procedure

Following Noblit and Hare's (1988) meta-ethnographic approach relevant papers from the search were reviewed, and their theoretical approaches, procedures, methodologies and data analysis were tabulated to help compare and contrast how each paper explored the experience of anxiety during pregnancy.

Key themes, metaphors and quotes from within the findings section of the included papers were tabulated to aid comparison. Using techniques of 'reciprocal

translation' (looking for similarities) and 'refutation investigation' (identifying differences or challenges to the emerging concepts), themes and concepts were clustered together based on their shared meaning or relationship (Atkins et al., 2008; Noblit & Hare, 1988). Themes were also tabulated to assist with the synthesis (Appendix 4). This approach enabled the identification of new overarching qualitative concepts/themes across all papers. The first researcher constantly re-read and referenced the original papers to ensure the newly synthesised themes still explained original findings. A second author (DMS) independently completed this analysis and resulting themes from both separate analyses were discussed. Although the names given to themes varied, both authors identified the same underlying concepts and therefore were in agreement on relevant themes and the line of argument which were reviewed and agreed by all researchers.

Findings

Characteristics of studies

The nine identified studies including a total of 281 women (Table 2). Participants varied in their socio-economic and cultural backgrounds, level of education and religious beliefs. Participants' ages ranged from 18 to 44 years. The nine studies varied in their focus reporting on the experiences of primiparous women, women with more than one child, women who experienced previous miscarriages or were experiencing complications.

Seven of the studies were conducted in developed countries. Two studies related to the experiences of women in developing countries, namely Tanzania (Rosario et al., 2017) and Malawi (Stewart et al., 2015). Whilst these two studies documented experiences of pregnancy and distress particular to the context of these countries (e.g., reduced access to higher quality medical care, lower rates of education and higher rates

of HIV), other themes and experiences related to anxiety were reported that seemed to transcend cultural specificities.

Participants of six of the studies were pregnant during data collection. Two studies (Rosario et al, 2017; Stewart et al, 2015) explored women's experiences of pregnancy whilst pregnant and postnatally. One study recruited women in the postpartum period only, but were asked to retrospectively share their views on anxiety and the use of anxiety instruments during pregnancy (Evans et al., 2017).

Eight of the studies used either interviews or focus groups to collect their data with a range of analytic approaches. One study (Côté-Arsenault, et al, 2006) used field notes and self-completed calendar entries to collect women's subjective experiences of anxiety over 25 weeks of gestation (roughly beginning in the second trimester). Data in this study were analysed using triangulation analysis.

Six of the studies broadly explored the phenomenon and experience of anxiety or anxiety and depression, four of which used anxiety measures in addition to their qualitative data collection method. Two studies (Andersson, et al, 2012; Côté-Arsenault et al., 2006) specifically focused on women's experiences of previous miscarriages and resulting anxiety in their current pregnancy. One study explored the pregnancy experience as a whole, with exploration of worry and anxiety (Schneider, 2002).

Quality ratings

Variations between studies in terms of their methodology and rigor were identified using Walsh and Down's checklist (see Table 2 & Appendix 3). Six of the nine papers were rated as being of high quality and as having reasonably low bias (Grade A), while three studies were rated to have moderate levels of confirmability, dependability and credibility (Grade B). All studies defined the aim, methodology, analysis and sample reasonably well. Papers assigned a Grade B did not fully report on reflexivity,

commented on ethics, systematically presented methodology or explained the theoretical framework used.

Inter-rater reliability checks

A second researcher, who independently completed reliability checks at various stages of the research, screened 40% of the titles and all 59 of the abstracts generated from the database search strategy, using the aforementioned inclusion/exclusion criteria. Results were compared with those by the main author and any disagreements were discussed with the research team to reach a decision. A kappa score of 0.83 (SD=.049, p>.001) was achieved for the title screening phase. The second stage of screening abstracts yielded a kappa score of 0.81 (SD=.101, p>.001). Both scores indicated high levels of agreement and inter-rater reliability. The same researcher also independently appraised all nine papers using the above mentioned checklist. A kappa score of 0.73 (SD=.247, p>.023) was achieved indicating a substantial level of agreement and inter-rater reliability (McHugh, 2012).

Table 2: Study characteristics and key findings

Number	Author, Year, Country	Study Aims- To explore:	Sample Size and Participant Characteristics	Assessment of Anxiety	Sampling Methods	Data Collection	Analysis	Main Findings	Walsh & Downe Rating (A-D)
1)	Staneva et al, (2017), Australia	Antenatal distress (depression/ anxiety)	(N=12) Age range: 22-34 Perinatal stage: 2nd & 3rd trimester Ethnicity: Predominately White Australian Language: English Psychiatric History: some with history of anxiety and/or depression, some with current diagnosis of anxiety/depression Additional demographics: n/a	Psychometrics: women had to score above a cut off on -The Edinburgh Postnatal Scale (EPDS) ≥ 12 (for dep) -Revised Prenatal Distress Questionnaire ≥16 (anx) Additional information on anxiety: survey to investigate mood changes since pregnancy	Advertisement via posters and online forums	Interviews	Thematic Analysis	The main concepts identified where; good woman and good mother: struggling, resisting, or striving toward the wish to be good, to be perfect, and to provide the optimum care for their babies	A
2)	Evans et al., (2017), UK	Antenatal anxiety and views on anxiety instruments	(N=19) Age range: over 18 (no range reported) Perinatal stage: Within 9 months	Psychometrics: measures of anxiety were not reported	Healthcare provider identifying eligible participants	Focus groups	Template Analysis	Three main themes identified: sources of support, administration of anxiety instruments and	A

			postpartum (retrospective) Ethnicity: 'different ethnicities' Language: not stated (English) Trimester: not stated Psychiatric History: excluded if in receipt of a severe or enduring mental health difficulty; history not stated Additional demographics: n/a	Additional reports of anxiety: self-identified as anxious during pregnancy				the use of instruments to prompt discussion. Women stated that anxiety instruments could help identify their anxious feelings and prompt a discussion around those feelings.	
3)	Rosario et al., (2017), Tanzania	Fears/worries related to infant and maternal health, birthing and ability to parent	(N=10) Age range: 18-3 Perinatal stage:18-34 weeks gestation & postpartum (retrospective) Ethnicity: Black African Language: English or Swahili Psychiatric History: not reported Additional demographics: 'Low-income/Middle-income' country; high mother and child mortality rate; high HIV infection rate; lack of education and health resources; high levels of religious and	Psychometrics: eligible is 'high scores' on Pregnancy Related Anxiety Scale (PRAS) Additional reports of anxiety: n/a	Participants recruited from a larger scale quantitative study	Interviews	Colaizzi method of phenomenological analysis	Pregnancy-related anxiety (PRA) was experienced a state of worry and concern, often causing physical symptoms, and disrupting personal sense of peace. While some themes in the women's experiences reflected the domains examined in the PRA scale, other experiences such as lack of knowledge, partner relationship, interactions with the healthcare system, spirituality and fear of	A

			traditional beliefs					HIV/AIDS were missing.	
4)	Stewart et al., (2015), Malawi	Local perceptions of stressors experienced by women during pregnancy and how mental health is recognised and understood	(N=98) Age range: 15-65 Perinatal stage: not stated ('parous women') (retrospective) Ethnicity: not stated except for Black African Language: predominantly Chiyao Psychiatric History: not reported Additional demographics: 'Low-income/Middle-income' country; high mother and child mortality rate; high HIV infection rate; lack of education and health resources; high levels of religious and traditional beliefs	Psychometrics: measures of anxiety were not reported Additional reports of anxiety: n/a	Researcher from a larger quantitative study purposively sampled	Focus group (x11)	Thematic content analysis	Three major themes were identified: pregnancy as a time of uncertainty, the husband (and others) as support and stressor, and the impact of stressors on mental health.	B
5)	Andersson et al., (2012), Sweden	Of anxiety during current pregnancy following one or more miscarriages	(N=13) Age range: over 18 (no range reported) Perinatal stage: between 9 and 12 weeks pregnant Ethnicity: not reported	Psychometrics: measures of anxiety were not reported Additional reports of anxiety: n/a	Participants had been selected to participate in the previous studies regarding follow-up visits with a	Interviews	Content analysis with an inductive approach	The analysis resulted in five categories: distancing herself from her pregnancy, focusing on her pregnancy symptoms, searching for confirming information, asking for ultrasound examination	A

			Language: Swedish Psychiatric History: not reported Additional demographics: not stated		midwife after experiencing a miscarriage			and asking for professional and social support. Because of their past experience with miscarriage, it could be painful to have another pregnancy terminate in disappointment.	
6)	Lehman & Wheaton, (2011), USA	Experiences of mood and prenatal care as part of a prenatal care group	(N=24 completed questionnaires & N=10 interviewed) Age range: 20-30 Perinatal stage: not stated (during pregnancy) Ethnicity: African American & Latina Language: Predominantly English Psychiatric History: not stated Additional demographics: low income	Psychometrics: - Edinburgh Postnatal Depression Scale & State-Trait Personality Inventory-State Anxiety subscale measures were collected, with some women scoring above cut off scores and some not Additional reports of anxiety: not stated	Purposeful sampling of women accessing a community prenatal care group	Mood questionnaires and Interviews (Mixed methods)	Thematic Analysis	Women‘s interviews suggest that CP is a promising context for getting information and support from others, learning about pregnancy, telling one‘s story and feeling a part of a something.	A
7)	Furber, et al, (2009) UK	Mild to moderate distress during pregnancy (depression/a	(N=24) Age range:24-39 Perinatal stage: 7-39 weeks gestation	Psychometrics: measures of anxiety were not reported Additional reports of	All pregnant women over 16 years who self-reported psychological distress to	Interviews	Framework analysis	Three main themes: the causes of, impact of, and ways of controlling distress. A range of experiences caused distress including past	A

		nxiety)	Ethnicity: not stated Language: English Psychiatric History: some with a history of depression or anxiety Additional demographics: only women with mild to moderate psychological difficulties were included	anxiety: healthcare professionals clinical opinion and patient notes	their midwife			life and childbearing experiences, and current pregnancy concerns. Psychological distress took over the lives of pregnant women. The strategies used to control distress included both positive and negative coping.	
8)	Côté-Arsenault et al., (2006), USA	Early pregnancy following a previous loss of a pregnancy	(N=82) Age range: 20-42 Perinatal stage: above 10 weeks gestation Ethnicity: predominantly White-American , then African-American, then other Language: English Psychiatric History: not reported Additional demographics: mix of socioeconomic status	Psychometrics: measures of anxiety were not reported Additional reports of anxiety: not stated	Through advertisements in hospitals and online	Data collection of field notes and entries into a self-completed calendar, recording events, thoughts, feelings over 25 weeks gestation.	Triangulation analysis, including thematic and content analysis	Themes identified in the data were Growing Confident, Fluctuating Worry, Interpreting Signs, Managing Pregnancy, and Having Dreams.	B
9)	Schneider, (2002), Australia	First time pregnancy (with a focus	(N=13) Age range:25-42	Psychometrics: measures of anxiety were not reported	Advertisement	Interviews	Grounded theory	The women's experiences were varied and diverse. Most had	B

on worry and anxiety in the interview topic guide)	Perinatal stage: 3rd trimester Ethnicity: Predominantly Anglo-Saxon Australian Language: English Psychiatric History: not reported Additional demographics: educated	Additional reports of anxiety: n/a	difficulty coping with the physical and emotional symptoms of pregnancy. Loss of control caused anxiety. Need for support emerged as important.

Analysis and synthesis of themes

The synthesis of all nine papers produced four over-arching themes, with related subthemes, and a 'line of argument', described as '*Pregnancy is a time of emotional, social and physical uncertainty, which is impacted by loss of sense of control and feeling judged, resulting in anxiety*', which linked the five themes together (Noblit & Hare, 1988). This was represented as a diagram (Figure 2) to suggest the dynamic relationships between themes and the 'line of argument' at the centre. A meta-ethnographic approach to synthesising data was used to compare (reciprocal translation) and contrast (refutation investigation) themes. Many similar themes were evident across all studies; however, no apparent contradictory themes were identified between papers. For example, although women's experiences varied depending on the nature of the pregnancy (e.g., first or second pregnancy or if complications were involved), accounts and experiences did not refute one another. Similarly, this synthesis indicated that certain experiences of anxiety were ubiquitous to women from diverse social, ethnic and cultural backgrounds. These themes are presented now with quotes from the nine papers used for descriptive purposes.

Theme 1: Pregnancy - a time of uncertainty and anxiety (intrapersonal experiences)

All nine studies referred to pregnancy as a time of uncertainty and anxiety. Although women reported the positive aspects and happiness of expecting their baby, participants commented on pregnancy itself being, at times, an unpleasant experience, particularly due to the level of uncertainty and anxiety it generated. The experience of anxiety could be categorised into broad sub-themes of physical, cognitive and emotional experiences and the impact these had on women's lives and relationships.

Subtheme 1- Physical: A predominant worry for women focused on what was or was not 'normal' during pregnancy. Women were unsure what physical changes were expected and healthy and which signalled cause for concern. Women also discussed concerns regarding the absence of symptoms and what this might mean about the health of their baby. In addition, some women seemed to struggle to understand and differentiate anxiety symptoms from pregnancy sensations.

> "Is it pregnancy nausea? Or is it anxiety nausea?[…] I tend to feel just sick in the stomach and not quite right." (Staneva et al., 2017)

This confusion might have led to further concern, or perhaps misattributing anxiety cues to symptoms of pregnancy and not seeking support. This difficulty in recognition and differentiating symptoms of anxiety from pregnancy has been reported as an issue for both pregnant women and healthcare professionals and has be deemed a criticism of current (generic) diagnostic criteria for anxiety (Misri et al., 2015) as well as posing barriers to women seeking emotional support.

Although self-monitoring was present for most women, primiparous women, who were unfamiliar with physical changes of pregnancy, and women who had experienced previous miscarriages or high-risk pregnancies seemed more anxious and hypervigilant for symptoms, or the lack there of, resulting in more persistent anxiety. Heightened anxiety for women who experienced miscarriages or complications has been well document within the literature (Geller et al., 2004; Johnson & Slade, 2003). Unfamiliarity with physical changes, particularly for primiparous women, seemed to have led women to seek reassurance from sources, such as the internet or healthcare professionals, in attempts to reduce their anxiety.

Subtheme 2 – Emotional and cognitive : Emotional ‘ups and downs’ during pregnancy was a common theme. Women across all nine studies experienced anxiety, ranging from ‘normal’/mild to high levels of anxiety and distress. Emotions were reported to fluctuate over the course of pregnancy and were impacted by changes to pregnancy which could be perceived as positive or negative. Seven studies described that women could often feel overwhelmed by their anxieties, particularly during difficult periods, leading to feelings of low mood, ambivalence and disengaging from their pregnancy.

> “They listened to the heartbeat and I said ‘I can’t ...’, because at that moment I didn’t want to bond.” (Furber et al., 2009)

Previous quantitative research has also highlighted the risk of high levels of distress and anxiety during pregnancy leading to disengaging from pregnancy, which in turn can disrupt the prenatal attachment process between mother and baby resulting in poorer postnatal outcomes (Condon & Corkindale, 1997; Hart & McMahon, 2006).
Women experiencing such ambivalence could then become anxious about not feeling ‘happy’ or being ‘grateful’ for their pregnancy, because they believed such ‘negative’ emotions were not in keeping with social expectations of motherhood. Staneva et al. (2015) also identified that women interpreted their ‘negative’ emotional experiences as ‘deviant’ to societal images of motherhood and therefore perceived themselves as bad mothers.

> “I should be happy cos we … wanted to fall pregnant […] so I should be really happy but I am finding that erm … I am not? And it’s … there is no real reason … why?” (Staneva et al., 2017)

Anxiety was also described by women as having ‘negative thoughts’ and getting ‘caught up’ in their heads. Worries were general as well as pregnancy-specific, relating to concerns of miscarriage, not bonding with baby, labour, being perceived as not good

enough, and fears that pregnancy and motherhood would impact relationships. Similar worry content has been previously reported in a quantitative study of two hundred women which attempted to develop a measure of antenatal anxiety (Georgsson et al., 2003). These worries are also present in some antenatal anxiety measures (Green, et al, 2003; Georgsson, et al., 2003) which might be more helpful anxiety screening measures to consider in antenatal settings in comparison to current questionnaires. Papers including women from developing countries reported similar content but also described heightened fears relating to dying or contracting disease due to poorer perinatal care. Most studied described women feeling overwhelmed and that their worries were out of control.

> "I'm anxious too. That's part of it. I'm anxious to see her. I'm anxious for her to get here. It's like it's taking so long and that stresses me. … At nights I be like, I can't do this no more. I can't I can't do it. It just, I don't know if I can go on with this. Did I make a mistake?" (Lehman & Wheaton, 2011)

Subtheme 3 - Relational: The impact of relationships, both past and present, on women's experiences of anxiety was evident in six of the nine papers (Furber et al., 2009; Lehman & Wheaton, 2011; Rosario et al., 2017; Schneider, 2002; Staneva et al., 2017; Stewart et al., 2015). Women were concerned how their own experiences of being parented might impact their ability to be 'a good mother' or to bond.

> "She (participant's mother) wasn't all that interested in us … so erm I am hoping that I am not gonna be anything like her (voice breaking down) sometimes I am worried that I am." (Staneva et al., 2017)

In three of the studies (Lehman & Wheaton, 2011; Rosario et al., 2017; Stewart et al., 2015) relationships with partners/husbands was a key theme in mediating anxiety. It

may be of note that these three papers included women from lower socioeconomic backgrounds. This might, in part, be due to additional stressors associated with lower income which might increase a sense of vulnerability for women during pregnancy. When comparing these three papers, if women felt secure and supported in their relationships then anxiety seemed to lessen. However, for women who felt dependent on their partners, but relationships were unstable, anxiety appeared common.

> "During that time (pregnancy) my husband was not around, he had travelled. We had poor communication when he was away. Whenever I called, he was not reachable. At the time he was away, I was already confused because (of) my situation and I needed him…. but at the time I couldn't get through to him, I was very worried during that time." (Rosario et al., 2017)

Research has demonstrated the impact of difficult relationships, within a lower socio-economic context, on stress during pregnancy (Ritter et al, 2000), because women may be more dependent on partners and have less access to resources to facilitate positive emotional wellbeing. It may be important for professionals to consider providing additional perinatal emotional and practical support when caring for women experiencing relationship difficulties.

Theme 2: Losing and regaining control

For women in seven of the included studies (Andersson et al., 2012; Côté-Arsenault et al., 2006; Evans et al., 2017; Rosario et al., 2017; Schneider, 2002; Staneva et al., 2017; Stewart et al., 2015) pregnancy involved a sense of loss of control. This was experienced by women with mild to high levels of anxiety and stress. Control related to women's responses to internal factors (e.g., body changes not conforming to perceived norms, uncontrollable worries, baby's development) and external factors (e.g., increased

dependence on others, multiple hospital appointments, choices in medical decisions due to complication). Women who struggled to accept the uncontrollability of pregnancy, and adjust accordingly, seemed to experience increased anxiety.

> "I was remembering saying to my mother that it's the first time in my life that I haven't felt in control. I'm not in control anymore (…) it's just all happening to me and I really don't have any control." (Schneider, 2002)

The role of control has previously been described within psychological theories (Bandura, 1977; Skinner, 1996) and within perinatal research (Keeton et al., 2008) as an important moderator of experienced levels of anxiety. Women's expectations of pregnancy, which are often socially constructed and at times unrealistic, might influence perceived control, whereby when expectations are unfulfilled one's sense of control and agency over the course of one's pregnancy decreases, leading to anxiety.

Five studies (Andersson et al., 2012; Rosario et al., 2017; Schneider, 2002; Staneva et al., 2017; Stewart et al., 2015) illustrated the need to re-establish some sense of control. One main method of coping was through learning in order to feel knowledgeable, better able to make informed decisions and therefore feel in control. There seemed to be a weight of responsibility on women to acquire enough information to allow them to be 'good enough' parents and not to harm their baby in anyway.

> "But when she is born, she might cry at night and there is no one to help me learn what might be wrong with her. Mostly I will guess. But for the days and nights now, I worry what could happen to her because of me" (Rosario et al., 2017)

Three studies (Andersson et al., 2012; Côté-Arsenault et al., 2006; Schneider, 2002) commented on how this sense of control and anxiety seems to change as pregnancy progressed. For example, Schneider's (2002) paper on the experiences of primiparous

women reported described pregnancy as unfamiliar and the first trimester a time of uncertainty, due to risk of miscarriage. However, as pregnancy progressed and milestones were met women became more confident, more tolerant of uncontrollability and therefore less anxious. This reduction of anxiety after the first trimester has been demonstrated quantitatively (Buist et al., 2011; Heron et al., 2004). This perhaps indicates that more emotional support early in pregnancy might be helpful, particularly for first time mothers experiencing anxiety.

Theme 3: Feeling Judged

A theme of feeling judged was clearly described in six of the papers (Evans et al., 2017; Lehman & Wheaton, 2011; Rosario et al., 2017; Schneider, 2002; Staneva et al., 2017; Stewart et al., 2015). Women reported anxieties if they felt they were not meeting social expectations or norms for both pregnancy and motherhood.

> "My anxieties are more based around what do people think of me and am I going to be a good mother" (Staneva et al., 2017)

Four papers (Evans et al., 2017; Lehman & Wheaton, 2011; Staneva et al., 2017; Stewart et al., 2015) discussed either comparing one's pregnancy to other mothers and/or experiencing other mothers as a source of judgement and anxiety. This perceived judgement from others appeared to be a cross-cultural concern:

> "Also when you are pregnant, and you get pregnant again before the other baby walks, not even crawling, so wherever you pass women, there is a lot of gossip there about you" (Stewart et al., 2015)

Women strove to be 'a good mother' and if they felt they were not achieving this standard they could begin to self-criticise and feeling anxious about their abilities. Women seemed to struggle with idealised or expected experiences (physical and

emotional) of pregnancy not matching their reality, which for some felt shameful and worrisome.

> "...your friends giving the perception that everything's wonderful, you almost feel like you have to be (grateful), I remember ... I'd say to people when I was pregnant -I hate it -it's horrible and they'd look at me funny..." (Evans et al., 2017)

Similar experiences of shame and judgement, when women felt their experiences were at odds with societal ideals of motherhood, was found in a recent meta-synthesis of antenatal distress (Staneva et al., 2015). Although such social experiences can be ubiquitous to all pregnancies, these experiences of judgement did seem to contribute to heightened anxiety.

More broadly, societal stigma of mental health seemed to influence the language women used to explain their experience and perhaps created barriers to disclosing anxiety for fear of being judged and labelled a bad mother.

> "I think with (first baby) I don't know why... I would have told fibs first time (regarding mental health) around because I didn't want to feel like a failure or I'm not coping which is probably why I got so poorly whereas this time I think I'm more open about it.'' (Evans et al., 2017)

Theme 4: Coping with anxiety

Eight studies (Andersson et al., 2012; Côté-Arsenault et al., 2006; Furber et al., 2009; Lehman & Wheaton, 2011; Rosario et al., 2017; Schneider, 2002; Staneva et al., 2017; Stewart et al., 2015) included a theme of coping or struggling to cope with anxiety during pregnancy. Two studies (Furber et al., 2009; Staneva et al., 2017) described how

pregnancy could involve a potential loss of usual coping strategies to manage anxiety, such as working, exercising or drinking alcohol. Four studies(Andersson et al., 2012; Côté-Arsenault et al., 2006; Furber et al., 2009; Staneva et al., 2017) mentioned what could be conceptualised as 'positive and negative' coping. Positive coping seemed to include such things as accessing social support, attending antenatal classes and yoga, information seeking or speaking to other women with shared experiences which helped to normalise experiences. Faith and religious beliefs were reported in four of the studies (Côté-Arsenault et al., 2006; Furber et al., 2009; Rosario et al., 2017; Stewart et al., 2015) as a positive influence, whereby faith in God helped with acceptance of uncontrollability and therefore helped to ease anxiety.

In contrast 'negative' coping involved attempts to reduce anxiety which could be considered less helpful, such as avoiding thinking about pregnancy, withdrawing socially or searching the internet excessively.

> "I can't go out and socialise when I'm feeling like this. At the minute I can't go out. I went to my friend's party. I had to come back cos I just felt anxious all the time" (Furber et al., 2009)

These 'negative' coping strategies functioned as attempts to reduce uncertainty (Dugas et al., 1998) or distress by engaging in avoidant behaviours (Salkovskis, 1991), which may have temporarily alleviated anxiety, but ultimately maintained emotional distress and its impact on functioning (Clark, 1999) during the antenatal period. Quite a few studies have explored patterns and predictors of coping during pregnancy (Hamilton & Lobel, 2008; Huizink, et al, 2002) which had indicated different coping styles mediate experienced anxiety. Such information might be useful when translated into clinical practice, to help women identify potentially maladaptive behaviours and develop alternative positive strategies to regulate emotions.

Theme 5: Role of healthcare professionals

The role of health care professionals and systems on women's anxieties and experiences of pregnancy was a common theme across seven papers. Professionals were often experienced as sources of information, reassurance and emotional support, which helped reduce uncertainty and anxiety. However, healthcare professionals could also be perceived as judging or invalidating of women's experiences depending on their responses to anxieties and worries. Some women spoke of how professionals could minimise, dismiss or not manage anxieties well.

> **"**I had sort of mentioned how I felt about having a baby to my community midwife and to my GP, and they kind of just dismissed it" (Evans et al., 2017).

Similar experiences with antenatal health care professionals and the impact of these relationships on mental health has been demonstrated (Bayrampour et al., 2017; Moore et al., 2016). Women reported a need for healthcare professionals to provide a trusting, non-judgemental space to talk, to be listening to, and for professionals to offer validating, empathic and normalising responses, as well as supporting women to manage of their anxieties.

In addition, women described health care systems could feel impersonal and inflexible which could pose challenges to building trusting relationships, without which created barriers to women disclosing anxiety. In the Evans et al (2017) study women described the experience of being asked about their anxiety screening a 'box ticking exercise' and not therapeutic.

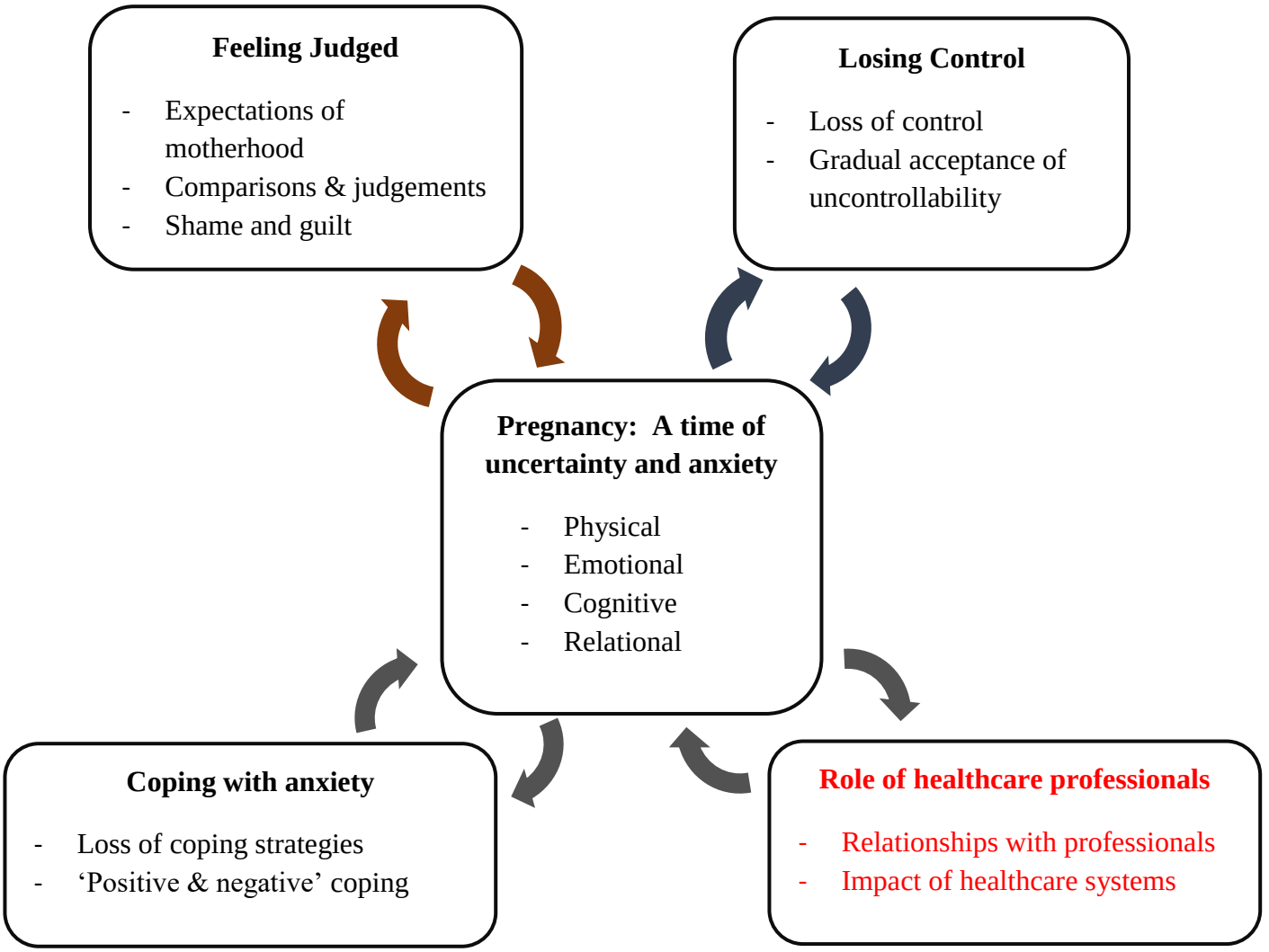
> "Oh fill that (mental health questionnaire) in while you're in clinic having a 20 minute appointment along with a load of other stuff and that was it then you'd be, well it's obviously just a box ticking exercise. Nobody actually cares." (Evans et al., 2017)

Standard screening methods within antenatal clinics, such as the Whooley questions which are recommended by NICE (2017), can be helpful if they are used to open a meaningful conversation about a woman's wellbeing, in which healthcare professionals are compassionate and validating. However, a qualitative study (McGlone et al., 2016) exploring midwives experiences of using such screening tools in the UK found midwives lacked confidence how to respond when disclosure were made or how best to offer support. Perhaps there is a role of clinical psychologist in training midwives to develop their skills in discussing and responding to mental health difficulties and in providing skills to help bolster confidence. There is also a clear need for such healthcare systems to facilitate trusting relationships to form between both midwives and women. New ways of working such as continuity of care could allow midwives to get to know their patients and to allow conversations regarding mental health and wellbeing to develop.

Line of argument

Overall a line of argument was identified which linked all themes across the included papers: *'Pregnancy is a time of emotional, social and physical uncertainty, which is impacted by loss of sense of control and feeling judged, resulting in anxiety'*. This is represented diagrammatically (Figure 2).

Figure 2: Diagrammatic formulation of line of argument and themes



Limitations

Given the potential negative impact of antenatal anxiety for both mother and baby, a synthesis of qualitative data provides new insights to understand the specific experiences of anxiety during pregnancy in order to provide better care and support. However, due to the lack of papers specific to antenatal anxiety the amount of studies available to synthesise was relatively small, therefore, potentially limiting the

transferability of the findings. Major and Savin-Baden (2010) recommend including between 8 and 12 papers for a metasynthesis. Although four papers included in the synthesis explored experiences of anxiety under the umbrella term of antenatal 'distress', it was clear that each paper gave equal weighting to the experiences of both anxiety and depression, and therefore it was possible to include them. However, as these studies used the term 'distress' it was sometimes difficult to fully discern if themes or quotes were specifically focused on anxiety. Quotes, metaphors and themes which were related to anxiety were included and referenced in the current paper to ensure anxiety was represented.

Another challenge was the conceptualisation of anxiety and defining its parameters. Although this review was interested in experiences more akin to generalised anxiety disorder, included studies were not required to have undertaken a formal diagnosis. This was due to current diagnostic difficulties identifying antenatal anxiety (Misri et al., 2015) as well as differences within qualitative research in how the topic under investigation is understood with self-identification with anxiety being more important. In addition, a review by (Brunton et al., 2015) reported a lack of instruments measuring antenatal anxiety with sound theoretical and psychometric properties, and a need for validation of existing questionnaires (Meades & Ayers, 2011). Therefore, the current study adopted a broader interpretation of anxiety. This approach allowed for the exploration of the varied nature of anxiety and its course as pregnancy progressed.

The current research focussed on the antenatal period specifically in order to gain a clearer understanding of anxiety related experiences particular to pregnant women. Anxiety, for the purposes of this paper, was defined using DSM criteria 5 (2013) indicating that the experienced level of anxiety might be above the expected level during pregnancy and that it may negatively impact functioning. Although some

reference was made within the synthesis regarding women's transitioning to motherhood it was beyond the scope of this research to address the research on transitioning to parenthood more broadly.

It is possible that during the transition to parenthood and motherhood specifically, which starts in pregnancy (Raphaell-Leff 2015; Nelson, 2003; Deave et al, 2008), women may experience a degree of worry or anxiety and this should be recognised. It is possible that the experience of transition to motherhood during pregnancy may overlap with aspects of the experience of antenatal or pregnancy-related anxiety, however, this has not yet been clearly delineated in the literature and it was beyond the scope of this review paper to do so. Reviews of the transition to motherhood (Nelson, 2003; Choi et al, 2005) highlighted the key aspects of this adjustment and how women feeling unprepared for motherhood and expectations not meeting reality led to uncertainty and feelings of inadequacy during this transition. Although the current study's themes overlap with the themes present in these reviews, the current study goes further to explore how various psychosocial processes influence anxiety and how this impacts on women's experiences of pregnancy.

A clear limitation was the fact that studies had to be written in English only, which introduces a language bias (Morrison et al., 2012). However, the included papers involved women from various backgrounds and countries which may improve the transferability of findings.

Finally, although the current metasynthesis only included studies which explored the experiences of adult pregnant women, as it was hypothesised the experiences of teenager might be qualitatively different, this exclusion might introduce a possible bias and limit the transferability of the findings.

Clinical implications

The findings of this synthesis have implications for professionals and services that provide care for women during the antenatal period. The main implication relates to the role of antenatal professionals in informing, correcting and dispelling stigma and resulting shame regarding anxiety during pregnancy. Given the unrealistic socially constructed expectations that influence women's expectations of themselves, their pregnancy and how they perceive they 'should' feel, antenatal professionals are in prime positions to normalise and offer more helpful and realistic standards for pregnancy and motherhood, which hopefully can reduce antenatal anxiety (Symonds & Hunt, 1996). Similarly, professionals need to validate and normalise the range of emotional experiences a woman can have during her pregnancy and tailor support to the woman's individual needs. This may involve a role for clinical psychologists in offering training, consultation or support to antenatal staff in terms of effective responses to disclosures and support for antenatal anxiety.

Given the level of uncertainty during pregnancy, but also the fact that each pregnancy is idiosyncratic, it seems the provision of information by healthcare professionals is needed to help understand what might and might not be expected, physically, cognitively and emotionally, taking into account any particular pregnancy factors, which could help women feel more informed and less anxious. This information, in particular, could help normalise and validate what women might perceive to be 'negative' feelings. This approach could also help relieve feelings of shame and provide a non-judgement space for women to talk about their emotional experiences and seek support if needed.

Professionals need to be aware of the stigma that might make disclosure of anxiety difficult, and therefore be conscious to open up conversations about mental

health in a non-judgmental and empathic manner. It is important that psychological wellbeing is given the same parity as physical health within antenatal appointments (Millard & Wessely, 2014). This might involve having conversations and providing information (e.g. leaflets) regarding the range of emotional an cognitive experiences which are usual and expected during pregnancy, as well as a list of local antenatal support groups which could offer a normalising space to women. Given the detrimental effects antenatal anxiety can have if intervention is not offered to support women it seems reasonable that emotional health should be given the same consideration, attention and time when offering health care during pregnancy.

Conclusions

The metasynthesis provided understandings of the various interacting factors, social and personal, which influence and contribute to women's experiences of anxiety during pregnancy. More validating, normalising and supportive responses from both society and healthcare seem necessary to improve women's felt experiences. These findings have implications for services and professionals who care for women during pregnancy, as well as highlighting broader social issues of pervasive stigma and unrealistic ideals of pregnancy. Further qualitative research is needed to specifically explore women's experiences of anxiety during pregnancy in order to better understand the important factors which influence anxiety during the antenatal period so professionals can develop their understanding of anxiety and offer better support.

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Paper 2

Women's experiences of anxiety during pregnancy: an interpretative phenomenological analysis

Manuscript prepared for *Midwifery*

Word count: 7,976 (excluding tables, figures and abstract)

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Full length articles and reviews, submitted to *Midwifery*, should be approximately 5,000 words in length, excluding references, tables and figures.

Submission Guidelines for *Midwifery* is presented in Appendix 1

Abstract

Objective: To explore women's experience of anxiety during pregnancy.

Design and Method: A qualitative, interpretative phenomenological analysis approach was used to explore women's lived experiences, using semi-structured interviews.

Setting and recruitment: Women were recruited through an antenatal clinic in the North West of England and through online forums.

Participants: Seven women who identified as experiencing anxiety during their pregnancy were recruited. Women were in various trimesters of pregnancy, were not deemed to be high risk pregnancies and had no other psychiatric diagnoses.
Findings: Four superordinate themes emerged: 1) Adjustment to pregnancy and motherhood and *the* experiences of anxiety, 2) Unfamiliarity, uncertainty and uncontrollability of pregnancy influences anxiety, 3) Personal and social expectations and pressures of pregnancy and motherhood and 4) Relying on healthcare systems – the good and bad.

Conclusions and implications: Women described cognitive and emotional aspects of anxiety during pregnancy and how these impacted their wellbeing. Personal and social expectations of pregnancy and motherhood increased anxieties. Being primipara, within the first trimester or experiencing pregnancy complications all involved uncertainty which increased anxiety. Healthcare professionals have the potential to reduce anxiety by normalising and validating experiences and offering emotional support. Continuity of care is important for developing trusting relationships whereby women to feel confident to disclose anxiety. Developing information for women regarding the range of physical and emotional experiences which can occur during pregnancy might be helpful in normalising experiences and reducing uncertainty and anxiety.

Keywords: qualitative, prenatal, antenatal, mental health, generalised anxiety, IPA.

Introduction

Pregnancy represents an important time of transformation and adjustment for women - physically, psychologically and socially. This transition to motherhood involves a significant change to a woman's identity (Nicolson et al., 1992). Although pregnancy can be a time of joy, it can also be a difficult time for women, potentially leading to anxiety (Dunkel et al., 2012). Although most women will naturally worry and feel anxious about the health of the baby, labour and coping postnatally, some women will experience levels of anxiety which might feel problematic or excessive, potentially reaching thresholds for clinical levels of generalised anxiety (Rubertsson et al., 2014). Generalised anxiety is defined in the Diagnostic Statistical Manual (DSM) 5 (2013) as excessive worry, disproportionate to current events, which the person finds difficult to control, causing distress, and it results in decreases in occupational and social functioning (Henderson & Redshaw, 2013; National Collaborating Centre for Mental Health UK, 2011). Anxiety may be associated with physical symptoms (e.g., tension, restlessness, fatigue, difficulty concentrating, sleep disturbance, etc.). It is of note that the application of general diagnostic criteria of generalised anxiety disorder (GAD) to a pregnant population has been criticised (Misri, et al., 2015) due to difficulties distinguishing expected pregnancy-related physical changes and worries from psychosomatic symptoms and excessive worries associated with GAD.

Although prevalence rates vary within the literature, approximately 15% of women will experience clinical levels of generalised anxiety during pregnancy (Goodman et al., 2014; Howard et al., 2018). Antenatal generalised anxiety (AGA) has been associated with increased risk of postnatal mental health difficulties (Huizink et al., 2017; Martini et al., 2015), disruptions in infant-mother attachment relationships (Condon & Corkindale, 1997), the release of excess cortisol during pregnancy

impacting on the neurodevelopment of the foetus (Van den Bergh et al., 2005) and negative outcomes on the infant's psychological development (O'Connor et al., 2002; Stein et al., 2014). Understanding the experiences specific to AGA is important to improve detection and to develop perinatal psychological treatment as well as offering preventative interventions.

Although understandings of AGA through quantitative studies have increased, few qualitative studies have explored women's lived experiences specifically during pregnancy. Of the existing literature, which attempts to investigate anxiety, it is often conceptualised under the umbrella term of antenatal 'distress', encompassing depression, anxiety and stress. Qualitative research by Staneva et al. (2017; 2015), exploring women's experiences of antenatal 'distress', reported that anxiety and depression arose when women felt their emotional or physical experiences of pregnancy were deviant from social ideals of the 'good mother' or unrealistic expectations of pregnancy. Women interpreted emotional distress as indicators that they were inadequate mothers. Similarly, Evans et al. (2017) found that stigma and discrimination of mental health/illness, inconsistency in antenatal healthcare and negative responses from professionals created barriers to women disclosing anxiety and accessing support. Although current qualitative research and theories of anxiety offer insights, these do not provide a clearer picture of how women experience generalised anxiety specifically during pregnancy and their transition to motherhood.

As bio-psycho-social factors influence pregnancy, motherhood and antenatal anxiety (Ross et al., 2004), it is important to consider various theories and perspectives when qualitatively analysing women's experiences. Feminist theories (Kendler et al., 1995; Laslett & Brenner, 1989) have critiqued how the pregnancy experience, typically a woman-centric event, has more recently been socially constructed in ways that can

disempower women. Young (1984) and Woliver (2002) comment that within Western society pregnancy has become conceptualised as a time of risk, hence has become medicalised. Although recognising the vital role medicine plays in promoting the health and safety of mothers and babies, this social emphasis seems to shifts control and knowledge to the medical model; thus, it has been argued, this shift subjugates a woman's control and expertise over her own pregnancy (Parry, 2008). Feminist theory also describes social ideals and expectations of pregnancy and motherhood which are imposed on women. Stoppard (2000) comments on an often prescriptive social image of the 'good mother', in which women are expected to embody certain ideals, such as devoting themselves totally to the needs of their baby and family, perhaps sacrificing their own needs and parts of their identity. Such ideals do not allow for recognition of loss, ambivalence, and other mood states which pregnant women commonly experience, potentially leading to women feeling isolated, anxious and doubting their own internal states and parenting abilities (Staneva et al., 2015). Jackson and Mannix (2004) report that women who do not see themselves living up to ideals of motherhood might experience societal disapproval, leading to anxiety.

Psychodynamic theory also provides explanations of psychological processes which can help understand women's experiences of anxiety during pregnancy. Winnicott (1956) described primary maternal preoccupation, which he explained as a psychological state a woman goes through to prepare for her transition to motherhood. Even if pregnancy goes as hoped, the antenatal period involves psychic change (Pine, 1972; Raphael-Leff, 1986), because a woman needs to reorganise her sense of self to assimilate a new baby into her identity. Raphael-Leff (2015, 1983) suggests conscious and unconscious processes during pregnancy whereby a woman aligns broadly with one of three parenting or mothering orientations, dependent on her internal word and social

circumstances in order to relate to her baby and motherhood. The first orientation termed the *Facilitator* suggests a mother will be totally giving of herself to motherhood and adapt her life to meet the needs of her baby. The second orientation termed the *Regulator* describes a mother who will try and retain her life and identity 'pre-baby' and strive to allow baby to adapt to her life. A mother who is flexible, meets her baby's needs without being overly involved or regimented is described as a *Reciprocator.* According to Raphael-Leff (2015), during pregnancy a *Facilitator* can feel guilt and anxiety if she is not meeting societal expectations. If a balance between their own identity with motherhood is not reconcilable, *Regulators* might experience frustration, uncertainty and sadness (Sharp & Bramwell, 2004).

Given that pregnancy can be a time of uncertainty and women have little control over the course of pregnancy and labour, the cognitive intolerance of uncertainty model is a useful theory to consider. Developed to formulate GAD (Dugas et al.,1997; Dugas et al.,1998), this model posits that uncertain or ambiguous situations may be highly anxiety provoking for some people, resulting in worry. Individuals with these traits might also have meta-beliefs that worry might help them cope by preparing them for feared outcomes or to prevent such outcomes occurring (Borkovec & Roemer, 1995; Davey et al.,1996). This worry, along with feelings of anxiety, leads to negative problem orientation and cognitive avoidance, both of which serve to maintain the worry. This theory, in part, might explain why some women during pregnancy might find anxiety more problematic.

Given pregnancy is a significant time of transformation and transition, the experiences of anxiety are likely to be qualitatively different than when a woman is not pregnancy. Qualitative information and understanding are important, particularly within a clinical context, to highlight anxiety-related experiences specific to pregnancy which

can support healthcare professionals to consider more broadly the issues that impact on the experience of pregnancy and perhaps offer more holistic support to women. Given the need to understand pregnant women's understandings of their lived experiences of AGA, the current study aimed to explore women's experiences of anxiety during pregnancy using an interpretative phenomenological analysis (IPA) approach. It is important to note that the current study aims to focus specifically on women's experiences and therefore this study does not explore existing literature or include issues such as the broader social context surrounding pregnancy and the transition to parenthood.

Method

Design

Given the exploratory nature of the research question, a qualitative design using IPA (Smith et al., 2009) was chosen. IPA seeks to understand people's lived experiences and the meanings they attach to these experiences to make sense of them (Smith et al., 2009). IPA explores the 'double-hermeneutic' of the researcher trying to make sense of how participants make sense of their experiences, while asking critical questions of the material to go beyond what is being said in an attempt to interpret meanings (Smith, 2011). Smith et al. (2009) recommended the recruitment of smaller numbers for IPA studies to allow for more in-depth analysis.

Recruitment and participants

Ethical approval was granted by an NHS Ethics Committee (ref 17/NW/0318) and the Health Research Authority (Appendix 5 & 6). Pregnant women, over 18 years of age, and who identified as experiencing anxiety were eligible to take part. The study was

limited to English speaking participants. Previous miscarriages, in vitro fertilisation (IVF) pregnancies, previous traumatic births and high-risk pregnancies were exclusion criteria because these experiences are distinct from a 'typical' pregnancy and therefore associated anxieties might be qualitatively different. Women with psychiatric diagnoses other than anxiety or mixed anxiety and depression were excluded because the presence of other clinical symptoms might not provide a clear picture of antenatal anxiety.

Midwives screened patient notes, approached eligible women attending antenatal clinics and sought consent for the researcher to contact them (see Appendices 7,8,9 for research documents). Online advertisements, using Twitter, Facebook and pregnancy forums, were also used (Appendix 8). For this recruitment pathway, women were screened by the researcher. Eligible women willing to participate provided written consent prior to being interviewed. Participants completed a 21-item mood scale (Depression Anxiety Stress Scale-21) (Appendix 11) to provide information regarding anxiety when screening participants and interpreting their data. No women were excluded based on their scores on this measure.

Interviews

A semi-structured interview schedule (Appendix 12) was developed based on current literature, with input from the university's Community Liaison Group, an group of experts by experience of mental health difficulties. The schedule was piloted with two pregnant women, discussed with them and further reviews to the content and structure were made. The interview covered three broad areas: i) the experience of anxiety during pregnancy, ii) communicating anxiety during pregnancy and iii) seeking women's advice about how to improve healthcare support. Open-ended questions allowed for exploration of arising areas of importance for participants. Women were

offered the choice to conduct the interviews either at their home or via Skype. Interviews were audio-recorded and transcribed verbatim by the first author.

Data analysis

Data were analysed using IPA guidelines (Smith & Osborn's, 2015). Two researchers (BH and DMS) analysed the data independently. Each transcript was read and re-read, while making exploratory notes about meanings, understandings and interpretations of what the participant might have been describing (see Appendix 14 for example). Interpretations were also made regarding specific language, metaphors and phrases used by participants. The transcript was then re-read and initial notes and data were condensed into emergent themes. These themes were then clustered based on connections and similarities in defining experiences or phenomena. Each cluster was assigned a subordinate theme name which reflected the researcher's interpretations. This process was then repeated for the remaining transcripts. Subordinate themes for each transcript were tabulated to facilitate comparing and contrasting the data. Subordinate themes connected by meaning across all transcripts were clustered together and overarching superordinate themes were assigned, which broadly reflected the shared experiences of participants. Each researcher reflected on and re-examined the process to ensure themes and connections were related to the participants' original data. Once both researchers had independently completed their analysis themes were compared and discussed to ensure that interpretations were plausible, coherent and grounded in the data. Any disagreements were resolved through discussion of the text and reasoning given by each researcher. All final themes were agreed upon by the research team.

Reflexivity

As qualitative researchers bring their own expectations, knowledge, bias and experiences to the research process, reflexivity is important for transparency and replicability (Smith et al., 2009). The first author was aware that his experiences of being a male, with no personal experience of pregnancy or parenting, might have impacted the way he related to the data, which potentially might have brought some naivety but also an unbiased perspective. The first author acknowledged his professional and academic experience of clinical psychology which offered perspectives in relation to understanding anxiety and the influence of social dynamics. The research team included a health psychologist (DMS) and a clinical psychologist (AW), both of whom were women and mothers as well as researchers of pregnancy and parenting. These varied perspectives and experiences within the research team contributed to greater trustworthiness in reducing bias when identifying themes.

Results

Sample characteristics

Eight women consented to participate; however, only seven completed the interview as one woman gave birth shortly after providing consent. This sample size was consistent with recommendations for conducting IPA (Smith et al., 2009) and in line with similar antenatal IPA research (e.g., Birtwell et al., 2015; Johnson et al., 2004). Participants were aged between 28 and 39. All women were white, employed and lived with either a partner or husband. All pregnancies were planned. Five of the seven women had no other children. Three women's scores on the DASS-21 indicated 'moderate' symptoms of anxiety, one scored as 'mild', and the remaining three women scored within the 'normal' range (see Table 1).

Table 1: Participant Demographics

Participant	Age	Ethnicity	Employment status	Relationship status	Trimester	Previous children	Complications (none deemed high risk by midwives)	Anxiety severity (DASS)	Stress severity (DASS)	Depression severity (DASS)
P1	35	White	Student	Partnered	3rd	0	Baby in lower average growth percentile	Moderate	Normal	Normal
P2	31	White	Employed	Married	2nd	0	Foetus diagnosed with talipes	Mild	Mild	Normal
P3	32	White	Employed	Married	3rd	1	N/A	Moderate	Moderate	Normal
P4	29	White	Employed	Partnered	1st	0	N/A	Normal	Normal	Normal
P5	28	White	Employed	Married	3rd	0	Vanishing twin syndrome	Moderate	Moderate	Normal
P6	39	White	Employed	Married	3rd	1	Intrauterine growth restriction	Normal	Normal	Normal
P7	31	White	Employed	Married	2nd	0	Previous ectopic pregnancy and termination	Normal	Normal	Normal

DASS score ranges	Anxiety	Depression	Stress
Normal	0-7	0-9	0-14
Mild	8-9	10-13	15-18
Moderate	10-14	14-20	19-25
Severe	15-19	21-27	26-33

Findings

The analysis yielded a total of 77 emergent themes. These were condensed into four superordinate themes that conceptualised the experiences of antenatal anxiety. The definitions and experiences of all participants were broadly in line with the definition of generalised anxiety outlined by the researcher. In addition, participants were asked to offer advice to healthcare professionals and pregnant women of how to better support anxiety during pregnancy, which were discussed as clinical implications. Superordinate and subordinate themes were depicted diagrammatically to suggest how each theme influenced anxiety as pregnancy progressed (Figure 1).

Superordinate theme 1: Adjustment to pregnancy and motherhood and the experiences of anxiety

Subordinate theme: What it is like to experience generalised anxiety

This theme related to how women described what it felt like to experience anxiety during pregnancy. All women described the cognitive experiences of anxiety reporting that their anxiety involved ‘overthinking’ and ‘worrying too much’ about uncertainties in their lives. Women described anxious thoughts as persistent, uncontrollable, ‘not comfortable’ and that they could be ‘difficult to let go’. Two women reported that they felt their level of anxiety were abnormal and at times it could lead to feel panicked. Women used words, such as feeling ‘upset’, ‘unsure, ‘overwhelmed’, ‘panicked’, ‘fear’ and ‘frantic’, to describe their emotional responses. Three women commented on physical changes when anxious, namely tension, poor sleep and a racing heart. Six of the women described how anxiety could impact them and their daily lives, either by them responding by seeking control and reassurance, or when overwhelmed feeling not their ‘normal’ selves leading to withdrawal and concealing how they felt from others.

The definitions and experiences of all participants were broadly in line with the definition of generalised anxiety outlined above, which was based on current theoretical and clinical evidence. Not all women reported experiencing anxiety prior to becoming pregnancy, however, those who did explained the cognitive and emotional experiences remained relatively the same, but that the content of their worries, the sources of anxiety, and their responses to anxiety changed during pregnancy.

Subordinate theme - Pregnancy focus of anxiety: All women mentioned the content of their worries and anxieties shifted to focus on pregnancy, motherhood and changes to their lifestyle. Most women spoke of i) concerns of losing the baby (particularly in the first trimester), ii) any abnormalities and their capacity to cope, and iii) fears about complications and labour and iv) feeling responsible for baby's development and any negative outcomes. Similar findings of the content of worries shifting during pregnancy have been reported (Evans et al., 2017; Furber et al., 2009; Schneider, 2002). The intensity and frequency of these worries seemed to be influenced by trimester and previous pregnancies. Worries also related to being a 'good mother'; for example, ensuring the best environment for their baby whilst in the womb, concerns about breastfeeding successfully, being able to manage stress postnatally and being able to bond. It seemed four of the participants who might be considered *Facilitators* in their orientation to motherhood (Raphael-Leff, 2001) were more preoccupied and anxious about their abilities as good mother and provide the best start for their baby. Worries also involved body image, impact of pregnancy/motherhood on current relationships and employment, and intrusive thoughts of harm to baby. Women spoke of contradictory worry about the presence and/or absence of symptoms and trying to

interpret their meaning, but never being fully certain which increased anxiety. The uncertainty intolerance model of GAD (Dugas et al., 1997) seemed a helpful model when understanding these experiences. For women, particularly for whom this was their first experience, pregnancy was a time of uncertainty, which was anxiety-provoking, as they could not truly re-establish a sense of certainty or control until their baby was born.

> "…with pregnancy the biggest stressor is knowing that you're not going to get any feedback (assurance) until the kid is born." (P3)

Subordinate theme - Adjusting to pregnancy and motherhood: Adjustment to and assimilation of motherhood into one's identity and life was a source of anxiety for five women. For first-time mothers it seemed difficult to comprehend how life would be once their baby has been born, how they would cope and the impact on their identities. One woman discussed her concerns of becoming 'mumzie' (P4) and whether this would fit with her sense of self:

> "And when you think about yourself and your identity and what that is about a lot of that is down to how you live your life and what you do and that feels like that will inevitably change (after birth)." (P4)

This potential dilemma for women might be understood in terms of Raphael-Leff's (1983; 2001) mothering orientation theory. This participant perhaps reflected a *Regulator* orientation, in that she wished to maintain her 'pre-baby' identity and hoped being a mother would not alter that too much. However, she continued to discuss her anxiety that she would inevitably lose a part of herself in the process of becoming "mumzie":

> "So it is kind of thinking you are going to become a bit of the 'mumzie' person, because that is who you are, a mum, but can you maintain who you are by like

still making time for friends and the things you enjoy that are separate to your child." (P4)

Similarly, a participant, carrying her second child, described her dilemma of feeling pressures to sacrifice her needs and hopes as a woman and professional to facilitate what she felt was expected of her as a mother:

"Like when my colleagues say 'Oh when you're pregnant your priorities change' and I don't think my priorities changed because I still want the same things." (P6)

Again Raphael-Leff's (1983; 2001) theory helps to understand how anxiety and frustration can arise when assimilation of motherhood (and associated expectations) might pose threats to one's sense of self. This same participant discussed social pressures on women having to choose between career and motherhood:

"I feel like I have been on this track since I was at school and so that has been a really long time…. But because I want all of it I don't want to have to choose and, you know, men don't usually or often have to choose." (P6)

In addition to psychodynamic understandings, the sense of choice participants spoke of could be understood from a feminist perspective (Gross & Pattison, 2001). Although pregnancy is often a shared experience within partners, women in this study (all of whom were in heterosexual couples) seemed to experience more social losses than their male partners, in terms of interruptions to their career progression, less time with friends and a sense of more responsibility during and after pregnancy to be a devoted parent. These losses could, understandably, lead to dilemmas, anxieties and changes in mood.

Subordinate theme - Coping with anxiety during pregnancy*:* Four women described how pregnancy could interrupt or prevent the use of their usual effective

coping strategies to manage anxiety, e.g. socialising, drinking alcohol and exercising. One participant explained how joint pain and morning sickness due to pregnancy impacted her wellbeing:

> "I used to run and that used to help with my anxiety, after I got pregnant I couldn't do that anymore, so it is something I miss that would help." (P1)

When asked what helped to cope with anxiety during pregnancy, social support from friends and family was noted as important by all women. Interestingly, five of the women reported that social support specifically from women who were or had been pregnant themselves had the potential to be extremely positive and powerful experiences. Women with shared emotional experiences of pregnancy were sources of reassurance and normalisation, which helped the participants feel confident, more tolerant of uncertainty and less anxious.

> "I can say these things with them (antenatal group), that I worry I am not taking good enough care of myself and this baby isn't going to get as good a start in life (as her first child) and they laugh and they say 'oh I have thought the same thing'. And rather than being dismissive it is really validating, not to be the only one that feels this way sometimes. And it is reassuring." (P3)

Although women attempted to cope, when anxiety became overwhelming some temporarily disengaged from their pregnancy and attempted to mentally avoid anxieties or potential triggers.

> "I guess I just have to push on and forget about this pregnancy and just wait to hold the baby in my arms (tearful), and until then just try not to think about it too much, keep myself occupied and push the worries to the back of my head as much as I can." (P2)

This potential disengagement from pregnancy due to anxiety could lead to ambivalence about being pregnant. High levels of anxiety and ambivalence during pregnancy have been shown quantitatively to be linked to disruptions in prenatal attachment leading to difficulties in the mother-child bonding postnatally (Rossen et al., 2016; Rubertsson et al.,2015).

Superordinate theme 2: Unfamiliarity, uncertainty and uncontrollability of pregnancy influences anxiety

Subordinate theme - First pregnancy unfamiliar: It was clear from each woman's description of their experiences that the nature of their pregnancy had a significant impact on anxieties. All seven women spoke of how their first pregnancy increased their anxiety. All women explained this was due to unfamiliarity with what was and was not 'normal' during pregnancy, not only in terms of the physical changes, but also how pregnancy could impact emotions and cognitions. One woman described her change in perspective:

> "And since the beginning (before pregnancy) I think I had a different point of view on being pregnant. I thought it would be totally different (disbelieving laugh) and because I didn't know my emotions and worry would be as it has been for me…. (pause) I think because usually pregnant women they don't talk about their feelings, at least my friends, they haven't talked about worrying or worries or things that weren't going well..." (P1)

It seemed women's expectations of how they would feel emotionally during pregnancy might not have matched with the reality and challenges of pregnancy. For the two participants on their second pregnancy, who were more experienced, anxieties were less persistent. The intolerance to uncertainty model (Dugas et al., 1997) can help

understand this theme and how the uncertainty of a first pregnancy can lead to anxieties. Given that primiparous women do not have prior experience or information to judge their pregnancy against, this gives rise to uncertainty regarding what is 'normal' or expected, comparisons with other women and attempts to resolve uncertainty (e.g. searching the internet), which for some ultimately led to maintaining anxiety. For second time mothers it seemed their prior experience brought confidence, more certainty and therefore they did not feel as anxious.

> "This time around I already have one (child), so the pressure is off a bit. I managed to bring her safety into the world, so I am more open to listening to people who say things like 'oh come on, don't worry'." (P3)

Subordinate theme - First trimester feels uncertain*:* Six women spoke of their first trimester being the most anxious time. Participants reported this was because of the first twelve weeks of pregnancy representing the highest risk of miscarriage. Due to this increased likelihood, women felt they could not tell friends and family they were expecting, because of fears of potentially losing their baby and having to share their loss. One woman in particular commented on the difficulty with this situation, of women trying to manage the most anxious time themselves without social support. Women reported the first trimester was anxiety provoking because they felt uncertain and unable to establish some sense of control as they waited for their 12 week dating scan. However, as pregnancy progressed, milestones were met, and there were clearer signs that baby was doing well, women reported a gradual acceptance of the uncontrollability and uncertainty of pregnancy, and therefore felt their anxieties decrease. Again, these experiences seem to be in line with the intolerance to uncertainty model (Dugas et al., 1997). As the first trimester is the most uncertain it is

understandable that anxiety is highest, but progression and signs that baby is developing (e.g., scans, movement) helps to reduce uncertainty. This decrease in anxiety after the first trimester in pregnancy has also been demonstrated in quantitative studies (Buist et al., 2011; Heron et al., 2004.).

> "It's (anxiety) gone down definitely, in comparison to the first trimester. I guess it's come with a bit of acceptance of not knowing (laughs) to some degree and at first, there was allot more worry about not being in control at all, whereas now I have started accepting some of that. It does still come back at times, the constant worry of whether the baby is going to be ok, and, yeah (sigh), I go through phases, but it is nothing like it was in the beginning." (P2)

Subordinate theme - Complications, uncontrollability and loss*:* Six women described a sense of powerlessness, anxiety and loss of hope when faced with pregnancy complications. Four participants experienced complications during their pregnancies (see Table2). These complications were distressing, not only fearing for the welfare of their babies, but also the loss of hope for providing their baby with the best start in life and plans for pregnancy and labour. Women reported a felt sense of responsibly which led to feelings of sadness, guilt and anxiety. Similar experiences of complications were described by Raphael-Leff (2010) who suggested a loss of a hoped for pregnancy might be particularly distressing for *Facilitator* orientated mothers, who perhaps on a conscious or unconscious level perceives not being able to provide the best gestation for her baby as a 'failing' of her as a mother (Raphael-Leff, 2010). In comparison, one woman who had been diagnosed with a genetic condition which impacted the placenta, but who had given birth before, spoke of a process of accepting and committing to her reality of not having much choice or control in having a 'perfect

delivery method', instead putting her faith in medical professionals to help choose the best plan. As this was her second pregnancy she described adjusting her expectations to what she felt were more realistic of her body and the uncontrollability of pregnancy, thus alleviating some guilt and anxiety.

Superordinate theme 3: Personal and social expectations and pressures of pregnancy and motherhood

Subordinate theme - Personal expectations*:* Expectations for pregnancy seemed to influence anxiety. A common theme was that women had images and plans for how they hoped their pregnancy and labour would go. However, for four first time mothers these expectations did not match with their reality which led to sadness and concern. One woman explained her sadness and worry at the loss of how she expected her pregnancy to go due to pregnancy scares and complications:

> "I guess it had not been that happy story, it has been just stress and worry, and visits to hospital and yeah (sad laughs) maybe for that reason we haven't done it (decorated the nursery). Obviously, I am super excited for the baby, you know, hopefully everything will be ok, but the whole experience and the constant worry if it is going to be ok, it's kind of over shadowed it at times." (P2)

Four women spoke about an image of a 'normal' pregnancy and if their own experiences did not conform when compared to other pregnant women's experiences (or information online) then anxieties increased. Similar findings have been demonstrated in quantitative studies, whereby negative social comparisons to other mothers and low self-confidence in primiparous women were associated with maternal depression (Fleming et al.,1992). One woman, who later discovered that the position of her placenta decreased her ability to feel her baby's movements, described becoming

anxious when she received weekly updates to an app on the phone on what she should expect to feel or when other women would make comparisons:

> "A woman I work, she was telling me how her daughter felt movement at sixteen weeks, and I am like 'oh gosh I am twenty five weeks and I haven't felt much' and people are telling me their normal, although they say 'oh it is different for everybody', but it still makes you question what is and isn't right and what should be happening and not. And people keep saying 'oh you look huge' and I am like does that mean I am fat does that mean I am normal. And that makes you think about things too much." (P7)

Subordinate theme - Social expectations: All seven women spoke about the social expectations and pressures regarding pregnancy or motherhood which generated anxiety. One woman spoke passionately about pregnancy being 'heavily moralised' within society, commenting on a sense of judgement and blame for women who might not have the 'ideal' pregnancy conditions (e.g., who are older or overweight) or who might have complications. She explained her frustration at how she felt blamed for things out of her control:

> "So, if you have a difficult pregnancy with lots of intervention it's somehow your fault, there was something you didn't do, did you not exercise enough, did you eat properly, did you have folic acid, or did you drink in early pregnancy. And from the health side a lot of the stuff probably makes a marginal difference because there are bigger (uncontrollable) factors." (P6)

Having previously experienced pregnancy and motherhood this participant was aware of social pressures and the emphasis on 'natural' methods, for example, women are

expected to breastfeed (even if that is not feasible), as well as being completely devoted to motherhood, perhaps to an extent that a woman's own needs become neglected:

> "But if you are on maternity leave there is pressure to be doing really motherly stuff, you are not meant to just be sitting on the couch watching Jeremy Kyle having a year off paid for by your employer and the tax payer , you're meant to be really doing, being quite saintly." (P6)

This often prescriptive social image of the 'good mother' has been critiqued within feminist literature (Stoppard, 2000), whereby women are expected to embody certain unrealistic ideals of motherhood, which does not recognise the reality of pregnancy/motherhood and the needs of women. Although such experiences might be pervasive for all women adjusting to motherhood, for some this pressure could be very anxiety provoking.

Four women spoke about a sense of judgement on them and their ability to be a 'good mother' if their experiences did not fit with social expectations. Women spoke of pressures to constantly feel 'happy' and 'grateful' with being pregnant, with no permission to feel unhappy or ambivalent even though all women reported pregnancy was difficult at times. When asked what people might think if she said she was not feeling grateful one participant said:

> "That I won't be a good mother, because like I think most of my friends they always say 'I miss my pregnancy belly' and these kind of things and I'm like 'I cannot wait to get rid of it' because I cannot look at the mirror and feel myself beautiful and it is difficult for me to sleep, especially because my belly is big, and doing small things and also now I have ligament pain so if I walk too much during the day I cannot sleep during the night, because of the pain. So it's not really nice." (P1)

These themes around social expectations of pregnancy and motherhood and resulting feelings of shame and anxiety were also highlighted in Staneva et al.'s (2017) thematic analysis of antenatal distress. Staneva et al. (2017) found that women could feel judged if their physical and emotional experiences of pregnancy did not fit with socially constructed ideals of pregnancy. One participant within the current study described the social pressures to feel and think a certain way during pregnancy, and if a women should speak out about difficult feelings or mental health there was a risk of being judged.

> "When people are talking about how they feel and anxiety related stuff people are more likely to make judgements about what they are going to be like as a parent, which is ridiculous. Which they wouldn't do if you were struggling with physical stuff." (P4)

Some women also felt there was no parity between physical and emotional difficulties in social discourse. It was more socially acceptable to discuss physical complaints without fear of judgement. However, if women were to discuss personal or emotional challenges during pregnancy with others there was a risk of being judged or criticised resulting in women avoiding disclosing their feelings.

Superordinate theme 4: Relying on healthcare systems – the good and bad

Subordinate theme -The impact of healthcare systems on anxiety: All the women's narratives included the impact of the healthcare system on their pregnancy and anxieties. One important theme which all women mentioned was an almost 'double edged sword' experience of medical tests or interventions. Although all women found scans reassuring, for most the period of waiting before and between scans was a nervous time. For women whose medical tests indicated potential problems anxiety increased;

however, this increased risk to baby prompted access to frequent monitoring and more support which helped somewhat with managing anxiety. It seemed that when problems were indicated and more medical interventions were recommended, women lost hope for a 'natural' pregnancy, but also a sense of control shifting from women feeling in control of their pregnancy to the healthcare system making more of the decisions. Although important, this increased role of medicine during pregnancy and in decision making has been discussed from feminist perspectives as potentially disempowering and therefore anxiety provoking experience if not managed correctly (Parry, 2008). This shift in control for one woman in particular (who might have a tendency towards a *Regulator* mothering orientation) was distressing and upsetting:

> "In my day-to-day life I am a manager of a team, I own a house, I have got a very happy relationship and a happy family and good friends and it feels like everything is ticking along perfectly…. And yeah I am quite in control. But obviously here there is nothing, I don't know, for a while being told there is nothing you can do, you just have to wait from scan to scan until the baby comes, and just pray for the best." (P2)

Women expressed frustration and dejection with the antenatal healthcare system at times, acknowledging the system was stretched in terms of resources, but because of this women felt powerless to affect change. One woman explained how she would like to have more understanding and control over what her labour and after-care would involve; however, she felt the system was not able offer enough support and she felt powerless to influence her treatment within a pressured system:

> "Yeah but I suppose there is nothing anyone can do. If I could, I know the NHS is stretched and everyone is doing what they can, but if I could I would pay all my savings to make sure I get better care. But I can't even do that." (P2)

This sense of dependence on a medical system with limited resources led this participant to feel vulnerable and anxious that she would be treated in an inhuman way once she had given birth as the system tried to see more patients rather than give her the care and time she needed:

> "Yeah because it is in the back of my mind and it worries me that I am just going to be pushed and shoved around, like an animal, moved from one shift to another, and whoever is on the latest shift mightn't know me at all, you know what has been going on for me. And I am worried they will be quick to box tick and release me and that is just a bit, it just feels you and your baby aren't as important to those people in the hospital." (P2)

Participants were asked about how easy/difficult it was to communicate their anxieties with health care professionals. Four women described their experiences of professionals asking about mental health as a 'tick box exercise' rather than being asked in a curious, personal and sensitive way.

> "I mean they ask me about it in general terms (sighs) when I go to an appointment. They have sort of a 'tick box' they do every now and again." (P5)

One woman felt this style of questioning shut down conversations:

> "Well it doesn't leave you much room really because it's not an even, it's a yes or no question anyway, it's a closed question. So I mean, I presume if you said yes I'd hope they'd ask you more about it. But it doesn't leave that, it is literally just a yes or no question. So you don't feel you need to talk about it then." (P5)

A qualitative study by Bayrampour et al (2017) also found depersonalised care and style of questioning was a barrier to women disclosing mental health concerns during pregnancy. NICE (2014) recommends the use of two item mental health screening questionnaires (PHQ-2 and GAD-2) within antenatal clinics. However, a qualitative

study of exploring midwives' and patients' opinions of these questions found them 'blunt' and not entirely helpful unless the professional was confident and able to facilitate a further conversation about mental health (McGlone et al., 2016).

Another participant wondered about the relevance of asking questions about her family history of mental health, because it felt probing rather than personal or interested in how she was feeling. This uncertainty and fear of stigma regarding mental health/'illness' caused anxiety whether her answers would be used or interpreted in a negative way:

> "I think if you knew a bit more about what would happen with that information, or what kind of support they were able to offer. And why the information is relevant. Like if they were asking just about me and how I'm feeling, that's important to ask, but when it is about your family maybe just saying 'we ask these questions for these reasons' because (inferring a reason) I think that would have stopped me worrying and wondering." (P4)

This was also linked to fears that healthcare professionals might themselves have judgements about mental health and what that meant about one's ability as a mother:

> "…they had me flagged for having anxiety and depression in the past, and I was a little nervous that I would be seen as high risk, but that I didn't have postnatal depression I had postnatal amazing." (P6)

Similar barriers of perceived judgements have been reported in women accessing perinatal mental health support (Goodman, 2009; Kingston et al., 2015).

Subordinate theme - Influence of relationship with healthcare professionals on pregnancy and anxiety*:* Although women described frustration and concerns with the system, women described the people working within those systems as kind and

compassionate. Women described how even small interactions with healthcare professionals had the potential to ease difficult times during pregnancy. One woman described going to have a quick routine check at her general practice:

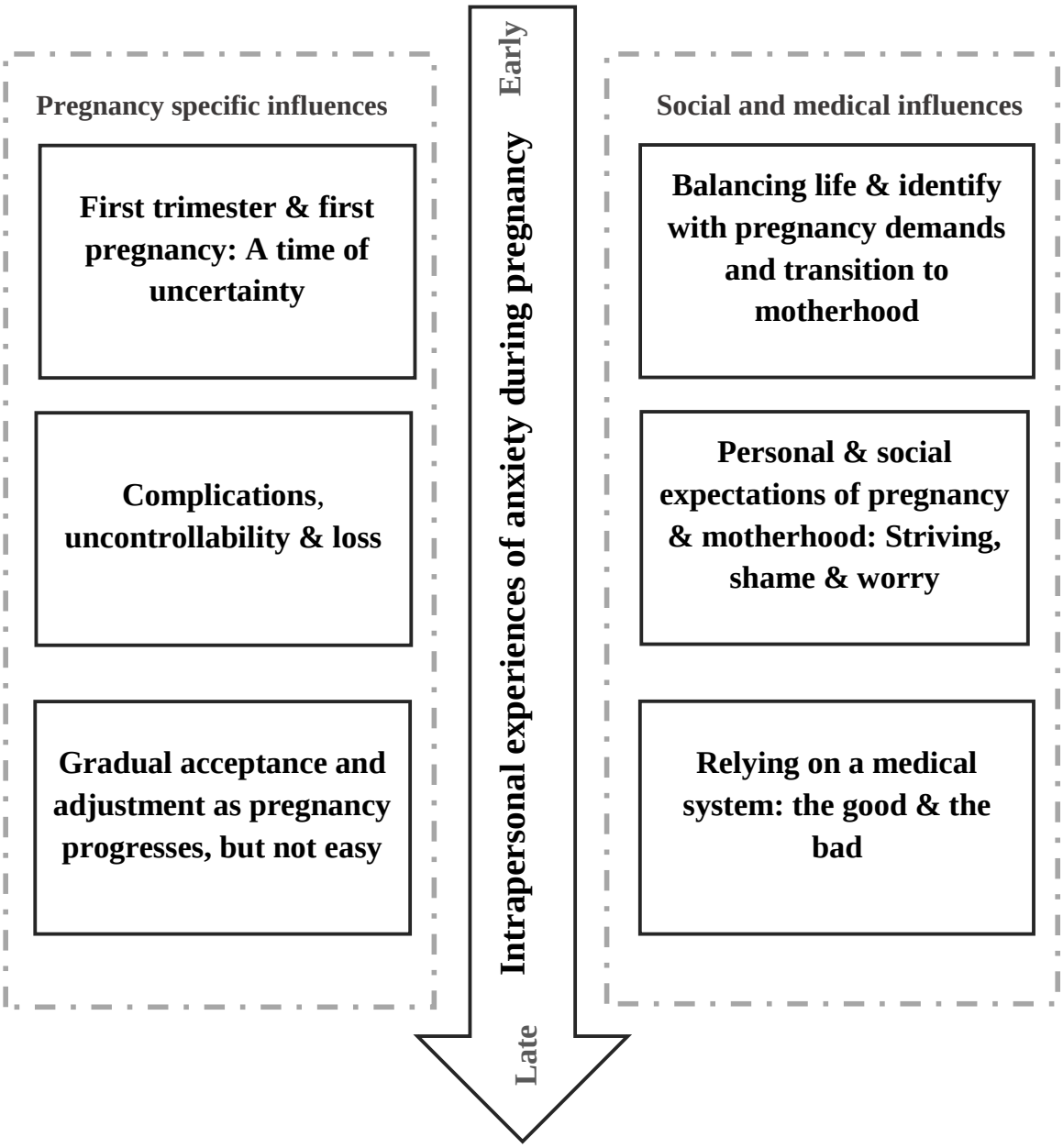
> "I was having quite a bad day, and was quite tearful actually when I went in, and she spoke to me for quite a while and actually gave me a hug (laughs) and everything while I was in there. So she was really nice. She could tell there was something wrong. Because when I went in I wasn't crying when I actually went in but she could tell there was something wrong and she got talking to me then. So she was quite nice." (P5)

Five participants spoke about the power of health care professionals to help normalise, reassure, and alleviate anxieties. Given how individual and different one pregnancy can be from another, women explained that midwives often dispelled myths, misconceptions and worries by helping women understand their pregnancies better and normalising both physical and emotional experiences. However, all women commented on the importance of building a relationship with just one midwife in order to establish trust and understanding. Without continuity of care this relationship was difficult to establish, preventing midwives from getting to know the women, creating barriers for women to disclose their anxieties and seek support. Having the same midwife at each appointment would allow conversations about mental health to develop, rather than different midwives asking the same 'tick box' questions. Women also reported having a relationship with a midwife would promote a sense of control and assurance, particularly in times of uncertainty or crisis, as their midwife would be able to offer person-centred care and support women's choice should difficulties occur. Various feminist writers have similarly commented on the power of midwives to empower

women during their pregnancy, to support personal choice and to ‘de-medicalise’ pregnancy (Johanson et al., 2002; Van Teijlingen, 2004).

> “I am hoping to have a home birth, that is what I have planned for, and the midwifes in my area are really positive about home births and what have you which is really good. They came round a few weeks ago to drop all the things off and they went through all the process about why you might be transferred into hospital and what their process would be at a home birth and all that kind of thing. Which was helpful. So there have been good points in the care I have received in lessening anxiety.” (P5)

Figure 1: Diagrammatic formulation of women's intrapersonal experiences of anxiety and influencing factors (subthemes and themes) as pregnancy progresses



Clinical Implications

Advice for healthcare professionals: The final section of the interview asked women to provide advice for health care professionals on how they could better support for women during their pregnancy who experience anxiety and what would make it easier and more acceptable to discuss anxiety. Table 2 provides a summarised list of all participants' advice.

Table 2: Advice for healthcare professionals from participating women

Asking about mental health	More parity between emotional and physical wellbeing; more time dedicated to discussing emotional wellbeing during antenatal appointments. Professionals to be mindful of stigma and barriers to disclosing anxiety; to open conversations in a sensitive and normalising manner, while being transparent about how information regarding mental health will be used. Professionals to avoid 'tick-box', closed questions regarding anxiety; development of natural, curious and caring conversations regarding anxiety throughout pregnancy.
Responding effectively	Professionals to give time and listen to what a woman is communicating. To respond in an empathic, non-judgemental, validating and normalising manner. To collaboratively discuss support with patient; whether emotional support from midwife or further referrals for psychological support.
Relationships	Continuity of care (appointments with the same midwife to build trusting and understanding relationships, and to facilitate disclosure and conversations about anxiety. Professionals to become familiar with patients to better offer person-centred care. Professional to be confident to discuss mental health. Mental health staff (e.g. psychologists) to offer to support and training to build staff skills if needed.
Practical advice	Additional information regarding upcoming appointments to reduce uncertainty Additional appointments or brief 'check ins' during first trimester (anxious time). Sharing information regarding all potential outcomes to help women prepare. Consider emotional support groups for pregnant women with shared experiences.

Advice for pregnant women experiencing anxiety: Participants were also asked to give advice to other pregnant women experiencing anxiety (Table 3). This information might be useful for developing informational leaflets for pregnant women regarding their mental health or anxiety.

Table 3: Advice for pregnant women experiencing anxiety from participants
- Acknowledging that no 'typical' or 'normal' pregnancy exists, and experiences vary. - Recognising the uncontrollability of pregnancy and being compassionate to oneself. - The importance of self-care to manage anxiety. - Access social support/groups, particularly talking to women with shared experiences. - To share emotional experiences with antenatal professionals. - To access psychological support if needed

Participants' overall advice informed the study's clinical recommendations. Primarily healthcare professionals need to be aware of persisting stigma of mental health problems and unrealistic social expectations of pregnancy and motherhood. Antenatal professionals need to be confident in discussing anxiety with women in a non-judgemental and empathic way, to normalise and validate experiences, while also aiming to readjust expectations and provide more helpful information regarding the range of emotional and physical experiences which occur during pregnancy. Clinical psychologists can play a role in training and supporting antenatal staff to develop their skills in assessing, responding to and supporting women with anxiety. This psychological support of antenatal staff is in line with recent Department of Health drivers (Future in Mind, 2015), which aim to enhance of perinatal services to better support women and build resilience to improve mother-baby attachments.

In terms of support, women mentioned that talking to other pregnant women with shared experiences of anxiety helped to normalise and validate feelings. Support groups could be offered. In addition, given that expected pregnancies can change due to complications, and this can be difficult to process and adjust to, some elements of acceptance and commitment therapy (Hayes et al, 2006) could be added to such groups to help women cope. The groups could also offer information regarding the physical and emotional experiences of pregnancy to help women understand and feel more in control.

Recent shifts within the NHS towards midwife-led continuity of care models (Sandall et al., 2016; Sandall, 2014) fit with recommendations from this research. Participants explained that access to the same midwife would help build a trusting relationship to facilitate disclosure of anxiety, to allow conversations regarding mental health to develop and for midwives to fully support and empower women during their pregnancy. This is in keeping with existing literature of the importance of therapeutic relationships when exploring mental health (Horvath & Luborsky, 1993; Pullen & Mathias, 2010).

In respect to screening and identification, the findings from this study (although tentative) indicate that current screening tools in the UK (Whooley questions, GAD-7 and Edinburgh Postnatal Depression Scale) might not be adequate to detect anxiety. AGA is clearly a distinct and separate experience to depression and therefore both the Whooley (Bosanquet et al, 2015) and EPDS (Cox et al, 1987) might not be sufficient. Women in this study also focused on the emotional and cognitive experiences of anxiety, rather than the psychosomatic elements which common anxiety instruments tend to test on (i.e. GAD-7). In addition, given the potential for misinterpreting anxiety symptoms as pregnancy symptoms, and challenge of determining expected versus

difficulties in transitions to motherhood, different measures should be considered. Perhaps more specific pregnancy-related anxiety questionnaires would be useful.

Study Limitations

Although each participant's experience was unique, more diversity and inclusivity of other demographics may have provided broader narratives and different experiences of antenatal anxiety. The fact that all participants' pregnancies were planned might have influenced women's emotional adjustment, and therefore their narratives regarding pregnancy might not reflect experiences of women with unplanned pregnancies. Although experiences and interactions between anxiety, stigma and pregnancy may be relevant to women from all backgrounds, the specific relationship between participants and the UK health system might make certain findings less transferable to women in other countries, accessing different healthcare systems.

More consideration could have been given to the inclusion/exclusion criteria. Recent miscarriage was an excluding factor to participation, because it was hypothesised that the specific fear of another miscarriage would not reflect general anxiety. However, previous terminations and other complications in pregnancy such as those reported by participants were not considered as exclusion criteria. On reflection, more liaison and consultation with midwives would have been useful when developing such criteria.

It is important to note that this study aims to focus specifically on women's experiences of anxiety during pregnancy and to understand predominantly the intrapersonal experiences of anxiety. Because of this focus broader understanding of social context surrounding pregnant women (e.g. relationships with partners, cultural factors, parenthood more broadly) have not been addressed in this paper. Similarly, a

substantial body research exists regarding the psychological process in transition to parenthood. Given the focus on women's experiences during pregnancy specifically, as well as exploring how generalised anxiety is experienced, the current study did not have the scope to explore all components of pregnancy and parenthood.

Conclusion

This study is the first to explore women's experiences of anxiety specifically during pregnancy. The findings, based on IPA, offer an in-depth understanding of how anxiety is experienced during pregnancy and the various factors which influence anxiety and pregnancy and transition to motherhood. Findings suggest that women report more cognitive and emotional experiences of anxiety, rather than psychosomatic. Results also indicate personal and social expectations of pregnancy and motherhood can increase anxiety. Healthcare professionals play an important role in normalising and validating experiences during pregnancy, while also adjusting expectations to help reduce anxiety.

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Paper 3

A critical reflection of the qualitative process of exploring women's experiences of anxiety during pregnancy

Word count (excluding references): 5,976

Introduction

The following paper is a critical reflection reflections on the research process which was beyond the scope of papers 1 and 2. The rationales and decision-making processes for both pieces of research will be discussed as well as the strengths and limitations of each paper. The researcher will also offer his own personal reflections.

Topic selection of paper 1 and 2

The topic selection of the empirical paper was chosen primary due to the researcher's appreciation of the importance of applying psychological understanding and research within a perinatal context, emphasised more so by recent governmental drivers to improve perinatal mental health support and services across the United Kingdom (Five Year Forward View of Mental Health, 2017). The choice to review current literature of qualitative research exploring women's experiences of antenatal anxiety was then guided by the aims of the empirical study.

Both papers aimed to understand how women defined anxiety (akin to generalised anxiety) and the factors during pregnancy and transition to motherhood which impacted anxiety. When initially reviewing the research it was apparent that more emphasis had been placed on a) the postnatal period and b) on certain mental health difficulties, namely postnatal depression and psychosis. In contrast, qualitative literature on antenatal anxiety was underdeveloped. It was hypothesised this was due to postnatal depression and psychosis perhaps being viewed clinically as being associated with more potential risk of harm to both mother and baby. This focus on depression and less so on anxiety also seemed present in antenatal settings. For example, up until a recent change in 2017, NICE guidelines (2007) recommended the use of two standard mental health screening questions (the Whooley questions), consisting of two items from the Patient Health Questionnaire (PHQ-9) a questionnaire of depression, with no

screening of anxiety. Similarly, NICE (2017) recommend the use of the Edinburgh Postnatal Depression Scale (EPDS) (Murray & Cox, 1990) for the screening of anxiety within antenatal settings, however, this the 10-item scale only has two questions specific to anxiety and one related to stress.

This imbalance within the research (and potentially within clinical recommendations) indicated a clear need for qualitative research and reviews to be conducted to better understand how women experience anxiety during pregnancy. Such information is important to understand and prevent negative outcomes associated with antenatal anxiety, such as disrupted prenatal attachments (Condon & Corkindale, 1997), development of postnatal mental health difficulties (Austin, Tully, & Parker, 2007) and impacted infant development (O'Connor, Heron, & Glover, 2002).

Although some quantitative studied have been conducted exploring of antenatal distress, it seemed that without exploring lived experiences of antenatal anxiety using more in-depth methodologies important information may be overlooked. For example, it is conceivable that the experience of anxiety is different and changes for women who are and who are not pregnant. Therefore, current diagnostic criteria or anxiety questionnaires standardised within a 'non-pregnant' population might not be totally suitable when applied to pregnant women or perhaps might miss key indicators of antenatal anxiety. Similarly, understanding of the potential intra and interpersonal influences on anxiety specifically to pregnancy might be useful when considering psychological formulations or models of antenatal anxiety. Information regarding how women experience antenatal anxiety in terms of cognitive, emotional, physiological and social experiences is important as well when considering developing screening tools. However, it appears that such qualitative evidence is lacking. Peters (2010) described the important role qualitative research plays in providing in-depth understandings and generating new ideas which can influence clinical practice or quantitative research.

Paper 1: Metasynthesis

Rationale for a metasynthesis

Given the research question aimed to review qualitative research of women's experiences anxiety during pregnancy, a metasynthesis was deemed appropriate. A meta-ethnographic approach was applied, allowing for the translation and comparison of themes, concepts and understandings across different studies to provide higher level interpretations, rather than simply aggregating data. In addition, the stepped methodology outlined by Noblit and Hare (1988) provides a systematic approach to synthesising data, while also preserving the integrity and meanings of the original texts. Metasynthesis has been reported to make qualitative findings more useable, while also identifying gaps in existing research (Savin-Baden & Major, 2010). Some, however, have criticised the appropriateness of synthesising qualitative studies, arguing that reinterpreting data might detract from initial meaning and integrity (Beck, 2002; Sandelowski, Docherty, & Emden, 1997). Walsh and Downe (2005) refute this criticism, explaining that without synthesis, qualitative research cannot be analysed further and integrated to provide new insights and understandings to emerge. Estabrooks, Field and Morse (1994) also explained that without integrating data around the same phenomena, qualitative research would remain 'non-reconcilable islands of knowledge' which cannot necessarily influence policy or clinical practice. Metasyntheses have been used in perinatal mental health to inform research and clinical practice (e.g. Button, et. al, 2017).

Defining the search terms and included studies

The initial challenge was conceptualising and defining antenatal anxiety. Given the aforementioned challenges of clinically defining antenatal generalised anxiety, as well

as qualitative studies perhaps relying less on clinical classifications, broad search terms were used and broad definitions of generalised anxiety were applied. This meant the review was not limited to experiences of women who received a diagnosis or be classified as having high levels of antenatal anxiety, rather the review attempted to capture and synthesise a range of experiences, from 'mild'/'normal' to 'high'. Given anxiety is a universal experience, which might change over the course of pregnancy, this broad conceptualisation seemed appropriate.

It was decided that the current study would only include the experiences of women over the age of 18. It was hypothesised by the research team that inclusion of papers which explored the experiences of teenagers might be qualitatively different to those of a woman legally deemed an adult given that teenagers may still be dependent on their families, the potential impact of societal stigma surrounding teenage pregnancy(Yardley, 2008), and perhaps complex psychological adjustment and transition to both parenthood and adulthood during adolescence (Cooley et al, 1998). Because of these issues it was felt that a separate study exploring anxiety during teenage pregnancy might be more appropriate; however, this exclusion does limit the transferability of this study. This inclusion of participants over the age of 18 also matched the demographics of the papers included in this metasynthesis. Although not explicitly defined as an exclusion criteria all papers included participants over the age of 18.

Searching and identifying papers for the review

Steps were taken to maximise the transparency of the search strategy, the screening of studies and the synthesis of themes. The search strategy was informed by the SPIDER search tool, designed specifically for identifying qualitative and mixed research designs (Cooke, Smith, & Booth, 2012). This tool has been shown to be more

efficient than PICO when searching qualitative studies (Cooke et al., 2012). Broad search terms were used to explore a range of experiences of anxiety.

During the initial stages of the search process papers were excluded based on titles alone when it was clear from reading the title that the study did not meet inclusion criteria, e.g. if the title focused on diabetes or PTSD during pregnancy. Given that qualitative paper titles can be ambiguous, the researcher was overly cautious and inclusive at this stage by including papers in the abstract search which may not have been clearly not relevant by their title. However, the fact the abstracts and titles were not screened together might have increased the chance of the researcher missing relevant papers. For future research the researcher will conduct combined title and abstract searches. Another issue linked with the exclusion criteria was also highlighted. Although papers were excluded based on abstracts which reported the phenomenon of interest was the participant's experience of a physical health issue during pregnancy or other psychiatric diagnoses, it was noted that included papers which did not clearly define their participant's mental or physical health demographics may still have recruited women who experienced physical health concerns or co-morbid diagnoses and therefore the author cannot be fully confident in assuming all the papers included in the synthesis did not involve additional health needs. To avoid this limitation for future research the researcher could be more inclusive and check full papers as well as contacting the authors of potentially relevant papers to gain demographic information which might not have been included.

The resulting papers from the search were not entirely homogenous, with some diversity in population characteristics and contexts, resulting in the findings perhaps being more transferable. A significant limitation of the search was the exclusion of papers which

were not published English. Although the metasynthesis included three studies which recruited participants from non-English speaking regions, this exclusion criterion introduced a language bias and restricted transferability. Because of this, there is a risk that multi-cultural information may have been overlooked and therefore findings might only be applicable to smaller antenatal population.

Paper 2: Empirical Paper

Rationale for Interpretative Phenomenological Analysis

When considering antenatal anxiety from a clinical perspective questions arose whether women's lived experiences of anxiety prior to conceiving changed once they discovered they were pregnant and what experiences were particularly influential during pregnancy. Initially reviewing the literature indicated few in-depth studies specific to antenatal generalised anxiety. No previous interpretative phenomenological analysis (IPA) research exploring generalised anxiety during pregnancy existed.

IPA was chosen, rather than a thematic analysis approach, as the research hoped to go beyond describing common themes across a larger number of participants, instead utilising an in-depth interpretive approach to understand women's experiences of anxiety and the sense they made of their anxiety in the context of transition to motherhood, transformation during pregnancy, and the social forces which can impact on one's experiences. Phenomenological research aims at identifying the essential components of phenomena or experiences which make them unique or distinguishable from others (Smith, Flowers, & Larkin, 2009), i.e. how antenatal generalised anxiety is potentially distinguishable from anxiety in a 'non-pregnant' population. Phenomenological studies focus on how people perceive and talk about experiences and events, rather than describing phenomena according to a predetermined categorical

system, conceptual and scientific criteria (Smith et al., 2009), therefore allowing the researcher and participants to go beyond potentially arbitrary diagnostic classifications. IPA also allowed for the application of relevant psychological and social constructionist theory to the analysis and interpretative process. Two of the primary theories used by the researcher were psychodynamic theory and feminist theory, which allowed for interpretation of the internal worlds of participants (conscious and unconscious processes and experiences), as well as social dynamics (e.g., social constructions of pregnancy, motherhood, the medical model and mental health) which might disempower women during pregnancy resulting in decreased sense of control and increased vulnerability and anxiety. According to Smith and Osborn (2015), IPA is a particularly useful methodology for examining topics which are complex, ambiguous and emotionally laden, such as antenatal anxiety.

Defining the participant group

As mentioned in both the empirical paper and metasynthesis, the research attempted to explore anxiety akin to generalised anxiety, however, given the challenges with applying diagnostic criteria during pregnancy (Misri et al., 2015), the fact that IPA goes beyond predetermined classifications, as well as the research aiming to explore the entire range of experienced anxiety (mild/'normal' to high levels), broader conceptualisations of generalised anxiety were used. Following this, the research team attempted to characterise the antenatal population which would represent and be most likely to experience this conceptualisation of generalised anxiety. It was decided that women with diagnoses of other mental health difficulties (other than anxiety or mixed anxiety and depression) would be excluded because these diagnoses might not provide a clearer picture of experiences particular to anxiety. The specific nature of current or

previous pregnancies and the impact of these on anxiety were considered. Women who experienced difficulties such as previous miscarriages, traumatic births, IVF pregnancies or were deemed high risk pregnancies were excluded because it was hypothesised that the women's worries or anxieties might be more specific to these challenging experiences rather than more general worries associated with a 'typical' pregnancy.

Despite the application of exclusion criteria in an attempt to define a group pregnant women who experienced antenatal anxiety, without additional difficult experiences which might make interpreting and discerning anxiety difficult, challenges to recruitment arose. The study gained a good level of interest online; however, it seemed women who had experienced antenatal difficulties (e.g., miscarriages) were perhaps hoping to share their stories in order to support other women with similar experiences. The number of ineligible (but interested) participants very much outweighed the interest received from eligible participants. This perhaps might be in part due to women, without difficulties to indicate anxiety, might not recognise or feel confident to disclose their distress. It is possible that this had a positive and negative impact on the data. The data may be less transferable to the experiences of women with challenging pregnancies; however, restricting the range of experiences seemed to help focus on experiences of anxiety which were more generalized.

Although diagnostic inclusion criteria were not applied, nor were diagnostic questionnaires used to exclude participants, an anxiety questionnaire was used to elicit some information regarding anxiety symptomology and provide additional context.. Interestingly three women scored within the 'normal' range (for the previous week) for symptoms of anxiety on the DASS-21; however, they identified with experiencing anxiety throughout their pregnancy and explained that if they had completed the questionnaire periodically throughout their pregnancy scores would fluctuate. Although

the scores did not necessarily add to the analysis, conversations with participants during completion of the questionnaires highlighted the challenges of using such measures, particularly during the relatively rapid changes during pregnancy, which might be important when considering the use of measures for future research and clinical purposes.

Other issues regarding inclusion/exclusion criteria arose once recruitment began and it became clear that the researcher's lack of detailed knowledge in antenatal physical health and classifications of complications became apparent. For instance, although miscarriages and traumatic births were exclusion criteria, one woman had experienced an ectopic pregnancy and a termination four years before conceiving again. Her previous experience did generate some anxiety that a similar complication would arise again, similar to the potential worries hypothesised as a result of previous miscarriages; however, she was still eligible. These specific pregnancy complications highlighted the difficulty in determining which experiences are helpful exclusion criteria to improve the validity of qualitative research, particularly given the multiple and changing factors during pregnancy. Despite with consultation with midwives when developing inclusion and exclusion criteria these multiple and continuously changing pregnancy factors highlighted potential challenges when conducting antenatal research.

The recruitment process and challenges

Initially, it was thought that recruiting participants through their contact with their midwives would be sensible. Given that anxiety, for some, can be a sensitive topic, as well as the relevant medical/pregnancy inclusion and exclusion criteria, midwives were considered to be in a prime position to identify women and introduce the study when appropriate. Research midwives were contacted, consulted with and they agreed that

recruitment would be feasible, and they were confident that recruitment would be achieved within a short time frame given the small numbers of participants required. However, this proved more difficult than initially anticipated and the researcher had to overcome several obstacles. Although initially deemed feasible by the lead research midwife it transpired that more junior and less experienced staff were not fully comfortable opening up conversations about anxiety because they did not feel equipped to navigate what they perceived might be a difficult and emotive topic, nor did they feel they had the time to do so. Therefore, fewer research midwives were available to recruit patients. In response, the researcher submitted an amendment to complete the screening himself, so that midwives were only required to provide information sheets and obtain consent for the researcher to contact potential participants. A second amendment for online recruitment was also submitted. However, these amendments and an administrative error by the ethics committee resulted in unnecessary delays to both hospital and online recruitment by approximately two months.

Other practical issues within the midwifery team also impacted recruitment. It was thought that general midwives would be able to identify potential participants from their existing patients, whom they knew and hopefully had trusting relationships with. However, due to issues regarding commissioning and job specifications only research midwives were permitted to be involved in the recruitment process. It seemed without regular contact and not being as familiar with patient histories, research midwives struggled to identify participants as easily. In addition, given this research was not funded it was not feasible for research midwives to dedicate large portions of their time towards recruitment and therefore not as many participants were recruited from this site as initially anticipated. Two other maternity hospitals were approached; however, due to capacity issues or lack of research midwives, these sites could not facilitate the research.

Online advertisement resulted in better rates of recruitment, although not without difficulties.

In hindsight, given the multiple amendments to the procedure and reapplication to the ethics board, it would have been prudent for the researcher to be more cautious and to seek approval for all means of recruitment at the beginning of the study, rather than relying completely on a system and healthcare team with multiple and conflicting demands. The research also gave insight into understanding the roles and limitations of members of a team who are supporting the research. The researcher learnt to liaise with the entire team at the initial phases of developing a research project in order to understand the group/team dynamics, to discuss which members can practically complete research activities and which cannot, and to help understand how the researcher can best support the team to implement the research effectively and overcome any barriers. The importance of involving stakeholders throughout the development of research, to determine feasibility capacity and barriers, has been documented with applied health research (Perry, Grange, Heyman, & Noble, 2008; Smith, Mitton, Peacock, Cornelissen, & MacLeod, 2009)

Inclusivity

Further issues arose during the recruitment process with regards diversity and inclusivity. The research employed purposive sampling, online and at the hospital site, in order to included women from all backgrounds and cultures. The researcher liaised with various different cultural groups online, who provided services or support for pregnant women. These organisations were supportive and advertised the study through posters, messages on Facebook or Twitter and through parenting groups. Despite this, only white women contacted the researcher to discuss the research further. Although

only hypothetical, the researcher wondered if cultural attitudes towards mental health difficulties as well as pervasive stigma and fear of repercussions of association with mental health research discouraged women from participating. Goodman (2009) and Woodall et al. (2010) reported barriers to women from various ethnic backgrounds disclosing antenatal mental health concerns due to fears that being labelled or diagnosed might result in others judging their abilities as a mother. Also, given the lack of funding for interpreters this might have been a deterrent for women who did not speak English to take part.

The researcher was also aware that only heterosexual women were involved in the research, therefore limiting the transferability of the findings. The researcher can only hypothesise, but given the exclusion criteria of IVF pregnancy (which might be a common means for lesbian couples to conceive) this might have excluded this group of women. Given the potential challenges for LGBTQ+ people in terms of experiencing stigma and homophobia regarding socially constructed heteronormative attitudes towards parenting and how this might influence antenatal anxiety, the views of LGBTQ+ in such research is vital. Sparse research has commented on the challenges faced by LGBTQ+ parents receiving perinatal care (Röndahl, Bruhner, & Lindhe, 2009; Wingo, Ingraham, & Roberts, 2018). This might limit the transferability of the findings of the presented empirical paper to heterosexual women. In hindsight, when developing the study, the research perhaps should have discussed the research with different organisations who provide antenatal services to various demographics to gain their expertise on the best way to include women.

The interview schedule and interview process

Various perspectives and experiences were enlisted in order to develop a meaningful interview schedule. Both supervisors had expertise in perinatal psychology, from a clinical as well as a health psychology perspective, and both were mothers which helped inform the initial schedule. The schedule was also developed with support from the Community Liaison Group (experts by experience in mental health) and through piloting the interview with two pregnant women. Once completed, participants were offered the choice to conduct the interview in person or via Skype. Despite reservations regarding the utility of Skype the research found the quality of data was on par to interviews conducted face-to-face, highlighting the helpfulness of technologies for future research projects. Iacono, Symonds and Brown (2016) commented on the viability of Skype as an alternative to qualitative interviews when face-to-face is not an option, while also broadening the geographic area for recruitment (Oates, 2015), particularly for hard to reach or smaller populations. Given the limiting inclusion/exclusion criteria, the potential for stigma to impede recruitment, and the short recruitment timeframe (given delays), the use of online recruitment to allow for a UK-wide catchment area was necessary.

The interview schedule was developed with three sections. The first explored women's experiences of anxiety more generally, not specific to pregnancy. These eliciting experiences and meaning were in accordance with the broad definition of anxiety outlined initially by the researcher. This gave the researcher confidence that both he and participants were discussing the same phenomenon. The second section of the research was exploring the experiences of antenatal anxiety, as discussed in the empirical paper. The third and final section of the interview asked participants for their recommendations to both healthcare professionals and other pregnant women regarding how to support and manage anxiety. On reflection and review of similar research this

approach of including participants' direct views and opinions in the empirical paper does not seem common place. However, given increased recognition of the importance of including patient/service-user/participants expertise ('expertise by experience') in developing mental health services as well as research (Tait & Lester, 2005; Thornicroft & Tansella, 2005), this section of the interview schedule seemed necessary and valuable.

Data sufficiency

The total numbers of recruited participants to this study were in keeping with recommendations for IPA, which suggest fewer numbers to permit more in-depth analysis (Smith, Flowers, & Larkin, 2009). Unlike grounded theory or thematic analysis methodologies which use theoretical sampling, with the aim to keep collecting data in the light of the analysis that has already taken place, until no new themes emerge (saturation), IPA tends to be purposive and broadly homogenous as a small sample size can provide a sufficient perspective given adequate contextualisation (Smith & Osborn, 2003; Brocki & Wearden, 2006). The researcher there adopted the idea of 'data sufficiency', often used in applied research and clinical settings, whereby recruitment ceases when the analysis achieves a coherent and integrated narrative and the aims of the research are addressed (Elliot, et. al, 1999). Following analysis of the seven transcripts by both authors (BH and DS) it was deemed that data sufficiency was achieved.

As mentioned previous although purposive sampling was employed in an attempt to include women from various demographics and backgrounds, despite efforts all seven participants were homogenous (e.g., white, employed, stable relationships, heterosexual). Although IPA is more interested in transferability to a small homogenous

group, and less about generalisability, it is possible that inclusion of participants with different experiences specific to their demographic (e.g. homosexual, unplanned pregnancy) might have resulted in a need to recruit more women in order to achieve satisfactory data sufficiency. Brocki and Wearden (2006) comment that in qualitative research it is always possible that the next interview might be the one to produce confounding evidence and it is therefore important that researchers acknowledge limits to the representational nature of their data. In terms of future research the researcher would wonder if exploring the experiences of specific demographics separately or as a whole would be more helpful.

Data analysis

The researcher had no previous experience conducting qualitative research or IPA and found the analysis stage particularly time consuming because he felt these steps needed to be repeated in order to compensate for his lack of experience. The task of the researcher to balance the interpretative analysis with maintaining the integrity and meaning of each individual transcript and each participant's narrative was also challenging. However, when compared to the analysis conducted independently by one of the supervisors (DS) similar underlying themes were identified (although the labels of these themes differed), which gave validity and confidence that the main author made appropriate interpretations.

Additional limitations

One limitation of both papers was that theories of social constructionism were not perhaps as present as they ought to have been in order to explain, in part, how anxiety might be generated during pregnancy. Oakley (1979) describes the experience

of pregnancy and motherhood as being socially constructed, whereby being pregnant and bearing children can change a woman's role and identity in society, leading to her, as Oakley describes, becoming 'public property' and subject to social expectations. From sociological perspectives it is reported that women are socially supervised and regulated during pregnancy (Martin 1987;Morrison 1984) and treated differently by their family and friends and more broadly by society (Morrison 1987;Balin 1988). Myers (1990) described pregnancy (and the transition to motherhood) as a socially ambiguous time, for example between a sense of health and sickness/risk, whereby a woman may be healthy but unable to live her life the way she typically might and might need to take precautions. Similarly women might transition from a state of feeling in control (i.e. of their bodies, careers, future etc) to feeling out of control (demands of the foetus and motherhood shifting that sense of control). This ambiguity about one's role and identify, alongside social expectations, control and pressures, can understandably lead to uncertainty and anxiety about how one should be socially during pregnancy.

Another difficulty when completing this empirical study (but also relevant to the metasynthesis) was the challenge of discerning what experiences of anxiety where expected and part of woman's transition to parenthood, and what experiences of anxiety might be conceived as problematic. This distinction was not totally clear, and it did not seem possible to truly disentangle anxiety related to pregnancy rather than impending parenthood more generally. Given that generalised anxiety is often classified as 'excessive' worry, the level to which worry might be deemed 'excessive' during pregnancy may be perceived as higher among pregnant women, given pregnancy can be considered a time of 'risk' and therefore anxiety might be expected. This therefore might generate ambiguity regarding what might be considered clinically significant

antenatal anxiety. It seemed for this study the main solution was to consider if anxiety negatively impacted participants functioning or wellbeing.

Clinical implications, dissemination and future research

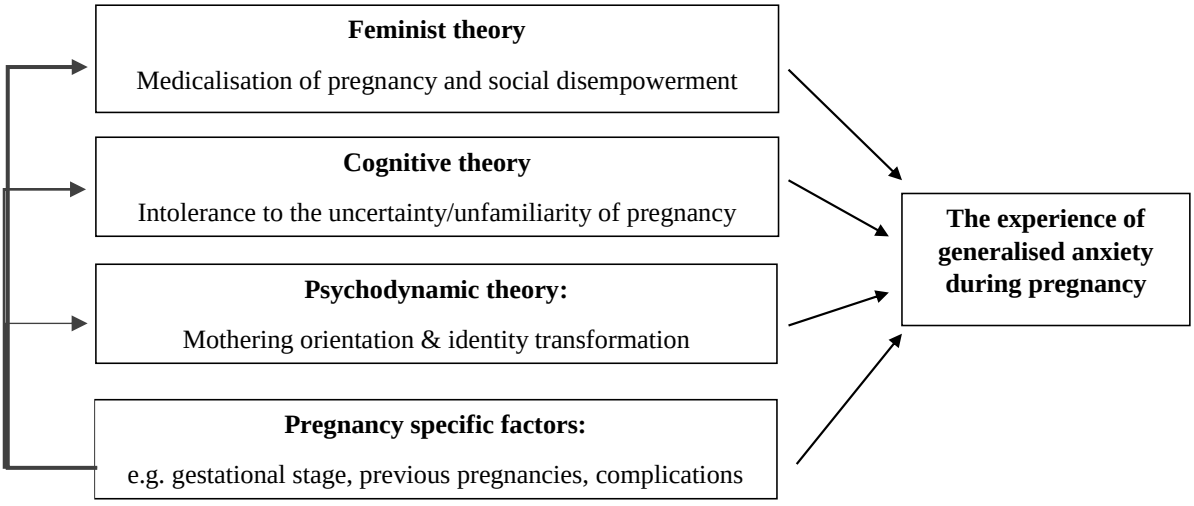
The aims of IPA research are not to offer generalizable findings, but to offer in-depth understandings which are transferable to a distinct group of people experiencing a particular phenomenon. Although the finding of both papers can only be transferable to pregnant women experiencing anxiety, the findings do speak to broader societal issues: stigma regarding mental health is still very much pervasive as well as social attitudes and expectations on women which can be unrealistic and disempowering, indicating a need for positive changes on how mental health and womanhood are socially constructed. Perhaps more public health initiative (e.g. through social media and health services) are needed to promote realistic, normalising and healthy representations of antenatal mental health.

More specifically, the empirical paper indicated that antenatal generalised anxiety might be qualitatively different to how it is experienced in the general population. Given that women self-identified as anxiety, but reported the content of their general anxiety shifted to focus predominantly on pregnancy, and the fact that women did not necessarily comment on physiological symptoms of anxiety might suggest that currently diagnostic criteria do not seem to totally represent antenatal generalised anxiety and therefore screening and identification might be lacking. More research into developing and improving screening tools might be necessary.

Although beyond the scope of this research, in terms of therapeutic approaches given the relevance of various theories (listed below) in understanding participants accounts and experiences, these same theories might be useful to consider when developing psychological models or formulations to improve the therapies offered

during pregnancy. Current NICE guidelines (2017) recommend the use of low intensity Cognitive Behavioural Interventions for subthreshold and "mild" antenatal generalised anxiety, and the use of high intensity Cognitive Behavioural Therapy (CBT) for more severe anxiety. Again, although not necessarily within the scope of this research, the worries women described did not necessarily seem unreasonable, and given complication and unfamiliarity did not necessarily seem excessive, but did cause distress. Therefore, the researcher would wonder if elements of CBT, such as cognitive restructuring, would be totally relevant. Also given the psychodynamic elements to women adjusting to motherhood, such theories might be helpful for therapists to bear in mind when offering therapy to women during pregnancy.

Figure 1: Diagram of theories and pregnancy factors which influence anxiety during pregnancy



Potentially the most relevant finding for the researcher was the importance and need foe continuity of care during pregnancy. A mentioned in the empirical paper, midwives can empower women and support their choices during pregnancy. Midwives can normalise, validate and be sources of great support. However, without seeing the same midwives repeatedly a therapeutic and trusting relationship cannot form. In addition, midwives

need to feel confident opening up conversations, discussing and normalising mental health issues. It may be that these conversations might be enough for some women to help resolve or abate anxieties, but also given the increase provision of perinatal mental health services, due to the Fiver Year Forward Plan (2017) midwives might be more confident in referring women for further support. However, it will be important for mental health professionals to support and offer to training antenatal professionals in building confidence and skills in sensitively discussing emotive topics.

Both papers were prepared for publication to Midwifery journal. The decision to submit the research to a midwifery journal, rather than a psychology journal, was because the research team felt the findings would be more informative and clinically helpful for midwives, who are caring for women during pregnancy and potentially screening/identifying antenatal anxiety. The findings of both papers are also due to be presented to the midwifery team who supported recruitment to the empirical study.

One main reason for conducting the research was the lack of qualitative studies exploring this phenomenon. Qualitative understandings of the nuances of what it is like to experience anxiety during pregnancy seemed necessary, primarily to provide a deeper understanding of women's experiences, but also to potentially add support to or contest current psychological understandings or ideas regarding antenatal anxiety and healthcare needs. The results of the empirical paper highlight complex psychosocial processes which impact women's experiences of anxiety, the persistence of social pressures and stigmas regarding pregnancy and motherhood and a need for these to be addressed. The paper attempted to synthesise various theories to help understand women's experiences from a psychological perspective, which perhaps has not been present in previous qualitative studies or antenatal anxiety. In addition, the study offered

insights into the impact that current healthcare provision and service pressures can have on women's anxieties and experiences of pregnancy and labour. One reflection on the research process if the importance of conducting research to update, deepen understandings and re-evaluate existing ideas and theories as well as attempting to produce was novel findings.

Reflexivity

The researcher was aware throughout the research process that he was a man researching a woman experience and that this dynamic could have a potential influence on the analysis and interpretation. The researcher acknowledged that being a gay man, with no experience of parenting, he might bring a level of naivety to the analysis. According to Oakley (2001), the potential benefit of both researcher and participant sharing a commonality (e.g., gender, parenthood) which can create a sense of "cultural homogeneity" that reduces power imbalance and aids shared understanding. However, the researcher's clinical experience within mental health settings and his understanding of anxiety and the various factors which can be influential was beneficial when interpreting the data and applying appropriate theory. The researcher was also aware that he was employed by the NHS as did the participants, which may have influenced some women in how they expressed their feelings toward the antenatal healthcare they were receiving. Being a trainee clinical psychologist, keen on improving support for service users with mental health difficulties, also influenced the development of certain questions on the interview schedule, specifically asking participants about their experiences of communicating their anxieties (or not) and seeking support from healthcare professionals in order to offer concrete examples of how we could make improvements.

Reflexivity is important within qualitative research to help guide the reader in understanding how the author's own experiences have influenced the research and analysis. It was highlighted, however, that perhaps within both metasynthesis and empirical paper that the level of reflexivity and explanation to the reader might have been lacking. The style in which the author presented reflexivity was informed by how reflexivity is reported in existing qualitive papers. Probst (2015), however, acknowledges that reflexivity has perhaps become reductionist and opaque in the way it is presented and reported, whether through the need to reduce word count for publication or reluctance to offer more personable reflections on the researcher's own dynamics with the data at the risk of veering away from expectations of objectivity in empirical research . Reeves et al (2008) report reflexivity should presented in the form of a description of the researcher's biases, ideas and experiences, which can be used by readers to judge the possible impact of these influences on a study.

Personal reflections

Conducting this qualitative and interpretative research broadened and added to the trainee's clinical knowledge and understanding. The main learning point for the trainee was a greater appreciation of feminist theory. Although aware of these concepts prior to completing the research, the trainee perhaps did not include these perspectives enough within his clinical practice and thinking. However, through immersion in participants' data, reflecting on and applying these theories the trainee gained a deeper appreciation of the influence of socially constructed ideals, attitudes and dynamics which can influence people's experiences, particularly groups who may experience subjugation. Analysing the data also highlighted the influence of power within social structures (e.g.,

the medicalisation of women's pregnancies and the medical model historically being a patriarchal social power; Petersen & Bunton, 1997; Plechner, 2000; van Teijlingen, 2005) and how these can have an impact (e.g., disempowering) on people's lived experiences and their mental health. This learning will be valuable for the trainee in his own clinical practice, particularly when developing psychosocial formulations with service users.

Conclusion

The findings of both metasynthesis and empirical paper highlight the various biological, psychological and social factors of pregnancy which can generate or maintain anxiety. Both papers indicate the nature of a woman's pregnancy itself is influential in how anxiety is experienced, whereby first-time mothers, women in their first trimester and women experiencing pregnancy complications might experience higher levels of anxiety and therefore additional support for women during these times/experiences might be important. Both paper highlighted the impact of unrealistic social expectations and stigma surrounding pregnancy, motherhood and perinatal mental health, demonstrating a need for intervention and education on a societal level to promote more helpful attitudes and hopefully remove barriers to women disclosing and seeking support for antenatal anxiety. Finally, more parity between physical and mental health needs to be established in antenatal health services, and professionals need to be mindful to develop trusting relationships with the women who access these services in order to promote conversations and support for women who experience anxiety during their pregnancy.

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Appendices

Appendix 1: Guide for Authors for Midwifery Journal

MIDWIFERY

AUTHOR INFORMATION PACK

TABLE OF CONTENTS

ISSN: 0266-6138

DESCRIPTION

Midwifery publishes the latest peer reviewed international research to inform the safety, quality, outcomes and experiences of **pregnancy, birth and maternity care** for childbearing women, their babies and families. The journals publications support **midwives** and **maternity care** providers to explore and develop their knowledge, skills and attitudes informed by best available **evidence**.

Midwifery provides an **international, interdisciplinary** forum for the publication, dissemination and discussion of advances in evidence, controversies and current research, and promotes continuing education through publication of systematic and other scholarly reviews and updates. ***Midwifery*** articles cover the cultural, clinical, psycho-social, sociological, epidemiological, education, managerial, workforce, organizational and technological areas of practice in preconception, maternal and infant care, maternity services and other health systems.

The journal welcomes the highest quality scholarly research that employs rigorous methodology.*Midwifery* is a leading international journal in midwifery and maternal health with a current impact factor of 1.948 (2016 Journal Citation Reports, Clarivate Analytics 2017) and employs a double-blind peer review process.

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Full length articles and reviews should be approximately 5,000 words in length, excluding references, tables and figures.

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References to a book:

Field, P. A., Morse, J. M., 1985. Nursing research: the application of qualitative approaches. Croom Helm, London.

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Mettam, G.R., Adams, L.B., 1999. 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.

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Appendix 2: Quality Rating scoring, Walsh and Downe, 2006

Stages	**Essential Criteria**	**Scoring: Clearly Described (1) Partially Described (0.5) Not Described (0)**	**Notes** **Grading**
Scope and purpose	Clear statement of, and rationale for, research questions/aims/purposes		
	Study thoroughly contextualised by existing literature		
Design	Method/design apparent and consistent with research intent		
	Data collection strategy apparent and appropriate		
Sampling strategy	Sample and sampling method appropriate		
Analysis	Analytic appropriate Appropriate		
Interpretation	Context described and taken account of in interpretation		
	Clear Audit trail given		
	Data used to support interpretation		
Reflexivity	Researcher reflexivity demonstrated		
Ethical dimensions	Demonstration of sensitivity to ethical concerns		
Relevance and transferability	Relevance and transferability evident		

Appendix 3: Quality Rating

Appendix 3: Table 4: Quality Ratings

Walsh & Downe Criteria (12 items)	Study 1	2	3	4	5	6	7	8	9
1 Clear statement of, & rationale for, research question/aims/purposes	1	1	1	1	1	1	1	1	1
2 Study thoroughly contextualised by existing literature	1	1	1	1	1	1	1	.5	1
3 Method & design apparent, & consistent with research intent	1	1	1	.5	1	1	1	1	.5
4 Data collection strategy apparent and appropriate	1	1	1	1	1	1	1	.5	1
5 Sample and sampling method appropriate	1	1	1	.5	1	1	1	1	1
6 Analytic approach appropriate	1	1	1	1	1	1	1	.5	1
7 Context described and taken account of in interpretation	1	.5	1	1	1	1	.5	1	.5
8 Clear audit trail given (discussion of research processes)	1	.5	1	.5	.5	1	.5	.5	.5
9 Data used to support interpretation	1	1	1	1	1	1	1	1	1
10 Researcher reflexivity demonstrated	1	0	0	0	0	1	0	0	0
11 Demonstration of sensitivity to ethical concerns	.5	.5	.5	.5	.5	1	.5	.5	.5
12 Relevance and transferability evident	1	1	1	.5	1	1	1	1	.5
Overall Quality Rating (Grade)	A	A	A	B	A	A	A	B	B
Independent Rating	A	A	A	B	A	A	A	B	A

Table Key:

- **1 = Fully fulfils criteria**
- **0.5 = Partially fulfils criteria**
- **0 = Does not fulfil criteria or is not present**

Scores:

- **A. 9-12**
- **B. 6-8**
- **C. 5-3**
- **D. 2-0**

Agreement
Disagreement

Reference Key:

1. (Staneva et al., 2017)
2. (Evans et al., 2017)
3. (Rosario et al., 2017)
4. (Stewart et al., 2015)
5. (Andersson et al., 2012)
6. (Lehman and Wheaton, 2011)
7. (Furber et al., 2009)
8. (Côté-Arsenault et al., 2006)
9. (Schneider, 2002)

Appendix 4: Emerging themes and presence in each paper

Emerging themes	1	2	3	4	5	6	7	8	9	Total
The experience of anxiety of anxiety	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
- Physical symptoms	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
- Emotions	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
- Cognitions	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
- Ambivalence	Y	Y		Y	Y	Y	Y		Y	7
- Uncertainty / What and is not 'normal'	Y	Y	Y	Y	Y			Y	Y	7
- Previous experiences	Y	Y			Y		Y	Y		5
- Impact on/of relationships	Y		Y	Y		Y	Y		Y	6
Adjusting self-identity	Y								Y	2
Control	Y	Y	Y	Y	Y			Y	Y	7
- See-saw / Progression of pregnancy					Y			Y	Y	3
- Loss of control	Y	Y	Y	Y				Y	Y	6
- The (un)regulated body	Y		Y		Y				Y	4
- Need for knowledge	Y		Y	Y	Y				Y	5
Coping with anxiety	Y		Y	Y	Y	Y	Y	Y	Y	8
- Loss of coping strategies	Y						Y			2
- Positive & Negative coping strategies	Y				Y		Y	Y		4
- Faith and Hope			Y	Y			Y	Y		4
- Social support	Y					Y	Y	Y		3
- What helps	Y	Y	Y		Y	Y	Y	Y	Y	8
Judgements	Y	Y	Y	Y		Y			Y	6
- Perceived judgements from other mothers	Y	Y		Y						3
- Comparison and self-criticism	Y	Y		Y		Y				4
- Idealised versus reality	Y	Y							Y	3
- Stigma of mental health (Language)	Y	Y				Y				3
- Barriers to talking / Isolation	Y	Y								2
- 'Weight of responsibility' to be a 'good mother'	Y		Y	Y		Y			Y	5
Healthcare professionals		Y	Y	Y	Y	Y		Y	Y	7
- Source of reassurance and of anxiety		Y	Y	Y	Y			Y	Y	6
- What works well		Y	Y		Y	Y			Y	5
- What is not working well / lacking		Y	Y		Y				Y	4
Impact of additional challenges			Y	Y			Y			3
- HIV/AIDS			Y	Y						2
- Health complications							Y			1
- Poorer income			Y	Y						2

Reference Key:

1. (Staneva et al., 2017)
2. (Evans et al., 2017)
3. (Rosario et al., 2017)
4. (Stewart et al., 2015)
5. (Andersson et al., 2012)
6. (Lehman and Wheaton, 2011)
7. (Furber et al., 2009)
8. (Côté-Arsenault et al., 2006)
9. (Schneider, 2002)

Appendix 5: Health Research Authority Approval

NHS
Health Research Authority

Mr Brendan Hore
Trainee Clinical Psychologist
University of Manchester & Manchester Mental Health and Social Care Trust
Division of Psychology and Mental Health
2nd Floor, Zochonis Building | Brunswick Street | Manchester
Manchester
M13 9PL

Email: hra.approval@nhs.net

11 July 2017

Dear Mr Hore

Letter of HRA Approval

Study title:	**The experience of anxiety during pregnancy: A qualitative study of undiagnosed women**
IRAS project ID:	**215719**
REC reference:	**17/NW/0318**
Sponsor	**University of Manchester**

I am pleased to confirm that **HRA Approval** has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications noted in this letter.

Participation of NHS Organisations in England

The sponsor should now provide a copy of this letter to all participating NHS organisations in England.

Appendix B provides important information for sponsors and participating NHS organisations in England for arranging and confirming capacity and capability. **Please read *Appendix B* carefully**, in particular the following sections:

- *Participating NHS organisations in England* – this clarifies the types of participating organisations in the study and whether or not all organisations will be undertaking the same activities
- *Confirmation of capacity and capability* - this confirms whether or not each type of participating NHS organisation in England is expected to give formal confirmation of capacity and capability. Where formal confirmation is not expected, the section also provides details on the time limit given to participating organisations to opt out of the study, or request additional time, before their participation is assumed.
- *Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria)* - this provides detail on the form of agreement to be used in the study to confirm capacity and capability, where applicable.

Further information on funding, HR processes, and compliance with HRA criteria and standards is also provided.

It is critical that you involve both the research management function (e.g. R&D office) supporting each organisation and the local research team (where there is one) in setting up your study. Contact details and further information about working with the research management function for each organisation can be accessed from www.hra.nhs.uk/hra-approval.

Appendices

The HRA Approval letter contains the following appendices:

- A – List of documents reviewed during HRA assessment
- B – Summary of HRA assessment

After HRA Approval

The document *"After Ethical Review – guidance for sponsors and investigators"*, issued with your REC favourable opinion, gives detailed guidance on reporting expectations for studies, including:

- Registration of research
- Notifying amendments
- Notifying the end of the study

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

In addition to the guidance in the above, please note the following:

- HRA Approval applies for the duration of your REC favourable opinion, unless otherwise notified in writing by the HRA.
- Substantial amendments should be submitted directly to the Research Ethics Committee, as detailed in the *After Ethical Review* document. Non-substantial amendments should be submitted for review by the HRA using the form provided on the HRA website, and emailed to hra.amendments@nhs.net.
- The HRA will categorise amendments (substantial and non-substantial) and issue confirmation of continued HRA Approval. Further details can be found on the HRA website.

Scope

HRA Approval provides an approval for research involving patients or staff in NHS organisations in England.

If your study involves NHS organisations in other countries in the UK, please contact the relevant national coordinating functions for support and advice. Further information can be found at http://www.hra.nhs.uk/resources/applying-for-reviews/nhs-hsc-rd-review/.

If there are participating non-NHS organisations, local agreement should be obtained in accordance with the procedures of the local participating non-NHS organisation.

User Feedback

IRAS project ID	215719

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 research management staff at our training days – see details at http://www.hra.nhs.uk/hra-training/

Your IRAS project ID is **215719**. Please quote this on all correspondence.

Yours sincerely

Sharon Northey

Senior Assessor

Email: hra.approval@nhs.net

Copy to: *Ms Lynne Macrae – Sponsor contact*

Ms Elizabeth Mainwaring, Central Manchester University Hospitals NHS Foundation Trust – R&D contact

IRAS project ID	215719

Appendix A - List of Documents

The final document set assessed and approved by HRA Approval is listed below.

Document	*Version*	*Date*
Contract/Study Agreement [Approval from study site]		05 August 2016
Copies of advertisement materials for research participants [Poster]	Version 1.0	08 December 2016
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [Employers liability]		01 June 2017
Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [Public liability]		30 May 2017
Interview schedules or topic guides for participants [Interview Schedule]	Version 1.0	03 January 2017
IRAS Application Form [IRAS_Form_04052017]		04 May 2017
IRAS Application Form XML file [IRAS_Form_04052017]		04 May 2017
IRAS Checklist XML [Checklist_05052017]		05 May 2017
Letter from sponsor [Letter from sponsor]	Version 1	28 March 2017
Non-validated questionnaire [Demographics]	Version 1.0	08 December 2016
Other [Statement of Activities]	1.0	
Other [Consent to contact]	V 1.0	26 January 2017
Other [Distress Protocol]	Version 1.0	03 January 2017
Other [Risk Protocol]	Version 1.0	03 January 2017
Other [Lone Worker Policy]	V 1.0	31 March 2016
Other [GCP]	Version 1.0	22 October 2015
Other [Conditions of Sponsorship]	Version 1.0	05 April 2017
Other [PanMan]	Version 1.0	05 April 2017
Other [Schedule of Events]	1.0	
Other [Midwifes' information]	Version 1.1	17 June 2017
Other [Response to REC]	Version	17 June 2017
Participant consent form [Consent form]	Version 1.3	17 June 2017
Participant information sheet (PIS) [PIS]	Version 2.1	05 July 2017
Referee's report or other scientific critique report [Research subcommittee approval]	V 1.0	21 November 2016
Research protocol or project proposal [Project Protocol]	Version 1	03 January 2017
Summary CV for Chief Investigator (CI) [CI CV]	V 1.0	03 January 2017
Summary CV for supervisor (student research) [Supervisor CV]	Version 1.0	19 September 2016
Summary CV for supervisor (student research) [Supervisor CV]	Version 1	22 January 2017
Validated questionnaire [Questionnaire]		03 January 2017

IRAS project ID	215719

Appendix B - Summary of HRA Assessment

This appendix provides assurance to you, the sponsor and the NHS in England that the study, as reviewed for HRA Approval, is compliant with relevant standards. It also provides information and clarification, where appropriate, to participating NHS organisations in England to assist in assessing and arranging capacity and capability.

For information on how the sponsor should be working with participating NHS organisations in England, please refer to the, *participating NHS organisations, capacity and capability* and *Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria)* sections in this appendix.

The following person is the sponsor contact for the purpose of addressing participating organisation questions relating to the study:

Name: Ms Lynne Macrae
Tel: 01612755436
Email: FBMHethics@manchester.ac.uk

HRA assessment criteria

Section	HRA Assessment Criteria	Compliant with Standards	Comments
1.1	IRAS application completed correctly	Yes	No comments
2.1	Participant information/consent documents and consent process	Yes	No comments
3.1	Protocol assessment	Yes	No comments
4.1	Allocation of responsibilities and rights are agreed and documented	Yes	The statement of activities will act as the research agreement between the sponsor and the NHS organisation. The sponsor is not requesting and does not expect any other site agreement.
4.2	Insurance/indemnity arrangements assessed	Yes	Where applicable, independent contractors (e.g. General Practitioners) should ensure that the professional indemnity provided by their medical

IRAS project ID	215719

Section	HRA Assessment Criteria	Compliant with Standards	Comments
			defence organisation covers the activities expected of them for this research study
4.3	Financial arrangements assessed	Yes	No application for external funding has been made and no funding will be available to site to support this study.
5.1	Compliance with the Data Protection Act and data security issues assessed	Yes	No comments
5.2	CTIMPS – Arrangements for compliance with the Clinical Trials Regulations assessed	Not Applicable	No comments
5.3	Compliance with any applicable laws or regulations	Yes	No comments
6.1	NHS Research Ethics Committee favourable opinion received for applicable studies	Yes	No comments
6.2	CTIMPS – Clinical Trials Authorisation (CTA) letter received	Not Applicable	No comments
6.3	Devices – MHRA notice of no objection received	Not Applicable	No comments
6.4	Other regulatory approvals and authorisations received	Not Applicable	No comments

IRAS project ID	215719

Participating NHS Organisations in England

This provides detail on the types of participating NHS organisations in the study and a statement as to whether the activities at all organisations are the same or different.
There is one NHS organisation taking part in the study, therefore there is one site type. The NHS organisation will identify and approach potential participants for consent to contact the researcher and will provide a meeting room for the researcher for any participants who choose to have the interview conducted at the NHS site. The Chief Investigator or sponsor should share relevant study documents with participating NHS organisations in England in order to put arrangements in place to deliver the study. The documents should be sent to both the local study team, where applicable, and the office providing the research management function at the participating organisation. For NIHR CRN Portfolio studies, the Local LCRN contact should also be copied into this correspondence. For further guidance on working with participating NHS organisations please see the HRA website. If Chief Investigators, sponsors or Principal Investigators are asked to complete site level forms for participating NHS organisations in England which are not provided in IRAS or on the HRA website, the Chief Investigator, sponsor or Principal Investigator should notify the HRA immediately at hra.approval@nhs.net. The HRA will work with these organisations to achieve a consistent approach to information provision.

Confirmation of Capacity and Capability

This describes whether formal confirmation of capacity and capability is expected from participating NHS organisations in England.
Participating NHS organisations in England **will be expected to formally confirm their capacity and capability** to host this research. • The sponsor should ensure that participating NHS organisations are provided with a copy of this letter and all relevant study documentation, and work jointly with NHS organisations to arrange capacity and capability whilst the HRA assessment is ongoing. • Further detail on how capacity and capability will be confirmed by participating NHS organisations, following issue of the Letter of HRA Approval, is provided in the *Participating NHS Organisations* and *Allocation of responsibilities and rights are agreed and documented (4.1 of HRA assessment criteria)* sections of this appendix. • The Assessing, Arranging, and Confirming document on the HRA website provides further information for the sponsor and NHS organisations on assessing, arranging and confirming capacity and capability.

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Principal Investigator Suitability

This confirms whether the sponsor's position on whether a PI, LC or neither should be in place is correct for each type of participating NHS organisation in England, and the minimum expectations for education, training and experience that PIs should meet (where applicable).
A Local Collaborator is expected to facilitate the participant interviews held at the NHS organisation. GCP training is not a generic training expectation, in line with the HRA statement on training expectations.

HR Good Practice Resource Pack Expectations

This confirms the HR Good Practice Resource Pack expectations for the study and the pre-engagement checks that should and should not be undertaken.
No access arrangements are expected as all study activity at the participating NHS organisation will be undertaken by NHS staff who have a contractual relationship with the organisation.

Other Information to Aid Study Set-up

This details any other information that may be helpful to sponsors and participating NHS organisations in England in study set-up.
• The applicant has indicated that they do not intend to apply for inclusion on the NIHR CRN Portfolio. • Some research activities may also happen outside of the NHS. HRA approval does not cover research activities outside the NHS. The research team must follow the procedures and governance arrangements of responsible organisations for these activities.

Appendix 6: Research Ethics Committee Approval

NHS
Health Research Authority

North West - Liverpool East Research Ethics Committee

Barlow House
3rd Floor
4 Minshull Street
Manchester
M1 3DZ

Please note: This is the favourable opinion of the REC only and does not allow the amendment to be implemented at NHS sites in England until the outcome of the HRA assessment has been confirmed.

06 November 2017

Mr Brendan Hore
Trainee Clinical Psychologist
University of Manchester & Manchester Mental Health and Social Care Trust
Division of Psychology and Mental Health
2nd Floor, Zochonis Building | Brunswick Street | Manchester
Manchester
M13 9PL

Dear Mr Hore

Study title:	**The experience of anxiety during pregnancy: A qualitative study of undiagnosed women**
REC reference:	**17/NW/0318**
Amendment number:	**1**
Amendment date:	**22 September 2017**
IRAS project ID:	**215719**

- In addition to midwives screening potential patients, if the midwives should no long have capacity (due to time constraints) then the researcher will attend antenatal clinics. The researcher will not have access to patient notes. The researcher will approach potential participants, introduce the study, and seek consent to contact. The researcher will then screen women over the telephone.
- Protocol updated to include the additional means of screening.
- Patient information sheet changed from indicating the patients notes will have been screened, to say that all women with a 'typical pregnancy' will be approached.

The above amendment was reviewed by the Sub-Committee in correspondence.

Ethical opinion

The members of the Committee taking part in the review gave a favourable ethical opinion of the amendment on the basis described in the notice of amendment form and supporting documentation.

The sub-committee did not raise any ethical issues.

Approved documents

The documents reviewed and approved at the meeting were:

Document	*Version*	*Date*
Notice of Substantial Amendment (non-CTIMP) [Amendment Form]	1	22 September 2017
Participant information sheet (PIS) [Participant Information Sheet]	2.2	22 September 2017
Research protocol or project proposal [Protocol]	1.2	22 September 2017

Membership of the Committee

The members of the Committee who took part in the review are listed on the attached sheet.

Working with NHS Care Organisations

Sponsors should ensure that they notify the R&D office for the relevant NHS care organisation of this amendment in line with the terms detailed in the categorisation email issued by the lead nation for the study.

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.

We are pleased to welcome researchers and R & D staff at our Research Ethics Committee members' training days – see details at http://www.hra.nhs.uk/hra-training/

17/NW/0318:	**Please quote this number on all correspondence**

Yours sincerely

On Behalf Of
Peter Walton
Alternate-Chair

E-mail: nrescommittee.northwest-liverpooleast@nhs.net

Enclosures: *List of names and professions of members who took part in the review*

Copy to: *Mrs. Elizabeth Mainwaring, Central Manchester University Hospitals NHS Foundation Trust*

North West - Liverpool East Research Ethics Committee

Attendance at Sub-Committee of the REC meeting on 23 October 2017

Committee Members:

Name	*Profession*	*Present*	*Notes*
Dr Supriya Kapas	Senior Clinical Pharmacist	Yes	
Dr Peter Walton	Retired Lay Member	Yes	Alternate Vice-Chair

Also in attendance:

Name	*Position (or reason for attending)*
Miss Nafeesa Khanam	REC Assistant
Ms Gemma Warren	REC Manager

Appendix 7: Patient Information Sheet

Participant Information Sheet (for Interviews)

Women's experience of anxiety during pregnancy: a qualitative study

Chief Investigator: Brendan Hore

Thank you for considering taking part in the above study. We are inviting pregnant women who might be experiencing anxiety or significant worry to talk to a researcher about this experience. At present there is little research to help us understand how women experience anxiety during pregnancy.

Please read the following information carefully and discuss it with others if you wish. If anything seems unclear or if you would like more information, contact us at any time. Take time to decide whether or not you wish to take part.

What is the purpose of the study?

We are carrying out this study to better understand women's experience of anxiety during their pregnancy. We would like to explore how being pregnant might impact anxiety/worry and how women might or might not communicate their anxieties to people, especially health care professional. Your participation will help improve our understanding and hopefully improve healthcare professional's ability to recognise anxiety during pregnancy and support women effectively in the future.

Why have I been invited?

It is common for women to experience worry and anxiety during pregnancy. The current study aims to explore the experience of women who might identify as feeling very anxious or being bothered by their level of worry. We are looking for approximately 10 pregnant women to take part in an hour-long discussion with a researcher exploring their experience of anxiety during pregnancy.

Do I have to take part?

No, you do not have to take part in this study if you do not want to. Participation is completely voluntary. If you decide to take part, you will be given this information sheet to keep and then

you will be asked to sign a consent form (a copy of which you will be given to keep). If you decide to participate, but change your mind later, you are free to withdraw at any point during the study, without giving a reason. We will destroy identifiable information, but we will continue to use the data collected up to your withdrawal. Your decision to withdraw from the study or a decision not to take part will not affect health care in any way and you will not be disadvantaged in any way.

What will happen if I decide to take part?

If you would like to take part in this study, I will arrange a convenient time and place to meet with you to tell you more about the study and to answer any questions you may have. Then we will talk for about 1 hour as part of an interview during which we will ask you some questions about your experiences during your pregnancy. This interview can take place at either your home address, at the antenatal clinic at St Mary's, in the psychology department at the University of Manchester or over the telephone. Any travel expenses will be refunded.

What does this study involve?

Participation will involve meeting with a researcher, completing two short questionnaires and talking about your experiences of being pregnant and your anxieties for about 1 hour. You will be asked a number of open-ended questions to allow you to share your thoughts about what it is like to be anxious during pregnancy and how you might let people know that you are worried. The interview will be recorded, transcribed and anonymised, so no participant will be identifiable.

What are the possible benefits of taking part?

Many people find it helpful to share their views and want to provide some feedback about their experiences. Although we anticipate that there will be no direct clinical benefit of taking part in this interview in terms of further improvements to your wellbeing, the information we receive may help improve understanding of anxiety and worry so that healthcare staff can eventually improve their ability to identify women who might be struggling with their worry and they can then offer suitable support in the future.

What are the possible disadvantages and risks of taking part?

For some people talking about their experiences and sharing their views can be difficult because this topic can be sensitive and personal. There is a possibility that talking about it may bring up strong emotions for some people. The researcher is currently training as a clinical psychologist so will be sensitive to such information. The researcher will be mindful of this possibility and proceed only if you wish to do so. He will also remind you can withdraw from the study at any time. One other disadvantage of participating in this study is the time commitment of taking part in an interview for an hour, however we will reimburse you for your time.

Will my taking part in the study be kept confidential?

The interview will be recorded using an audio-recording device. It will then be transcribed, at which point any personal information will be anonymised, which means that your name and any information which could identify you will be taken out, and a code will be used instead. All data will be stored securely. Sometimes, a study needs to be looked at by individuals outside of the research team to make sure it is being carried out as planned. This normally happens during an audit or monitoring visit and is carried out by the University or the sites hosting the study or an external regulatory body. The purpose of these checks is to look at the study but it may require access to all files, including ones containing your personal data. You will be asked to agree to this on the consent form. All of the individuals that might need to look at the information will have a duty of confidentiality to you as a research participant. Other than this only the researcher and his supervisors will have access to any data collected. We all will have a duty of confidentiality to you as a participant. Personal data such as names and addresses will be destroyed at the end of the study. Information will remain strictly confidential and will not be shared outside the research team. There is one exception to this: If you tell us anything that makes us think that you or anyone else is at risk of harm, we will have to share this information with your midwife, GP and consultant obstetrician. Your consent to participate in this research will also be documented and filed in your patient NHS notes by the midwife.

When we publish the findings of this study, we may use direct quotes, but these will be used in such a way that they will not reveal your identity. Written transcripts of the interviews will be kept for a maximum of 5 years after the date of any publication which is based upon it to follow recommended good practice guidelines for research. Transcripts will then be destroyed.

What will happen if I do not want to carry on with the study?

You can withdraw from the study completely at any time without giving a reason and without any consequence to your current or future NHS treatment. No further data will be collected from the moment you withdraw. You can withdraw from the study, even if you have begun your interview. Once the interview has been transcribed anonymously then you can no longer withdraw as your data will not be identifiable. Transcribed data will be anonymized with a pseudonym so no identifiable information will included.

What will happen to the results of this study?

Once all the information has been collected and analysed, the findings will be published in an academic journal. We will also share the results with the maternity team at St Mary's. The study will hopefully be shared with other women, wider health care professionals and researchers at conferences. In all cases, any information you provided will be anonymous and used in such a way so they will not identify a particular participant. The results will also be used as part of the researchers/trainee clinical psychologist's thesis.

This study will hopefully be published as a thesis and potentially in an academic journal which will be available online for both public and professional to view the results. This can be useful particularly for other pregnant women not included in the study to read as well as health care professionals.

The data collected during this study could be used to support research in the future. We may use the data in future studies or share it with other researchers working on other studies. All of the data used for future research will be anonymised and so no-one will be able to identify you.

Who is organising and funding the study?

This study is part of the researcher's doctorate training in clinical psychology which is being sponsored by the University of Manchester and the contracting institution is the Manchester Mental Health and Social Care Trust. The maternity team at St Mary's Central Manchester Hospital have kindly agreed to support and facilitate this study also. This study is supervised by Dr Anja Wittkowski, the University of Manchester and Dr Debbie Smith, Leeds Trinity University. Dr Wittkowski also works for the Greater Manchester Mental Health Trust.

What if there is a problem (complaint)?

If you have a minor complaint then please contact the researcher(s) in the first instance: Brendan Hore at brendan.hore@postgrad.manchester.ac.uk . If you wish to make a formal complaint or if you are not satisfied with the response you have gained from the researchers in the first instance, then please contact the Research Governance and Integrity Manager, Research Office, Christie Building, University of Manchester, Oxford Road, Manchester, M13 9PL, by emailing: research.complaints@manchester.ac.uk or by telephoning 0161 275 2674 or 275 2046.

In the unlikely event that something does go wrong and you are harmed during the study, you may have grounds for a legal action for compensation against the University of Manchester or NHS Trust but you may have to pay your legal costs. The normal NHS complaints mechanisms will still be available to you.

Who has reviewed the study?

Most research in the NHS is looked at by an independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and approved by North West - Liverpool East Research Ethics Committee ([REC ref: 17/NW/0318]).

Thank you for considering taking part in this study.

Contacts for further information

Brendan Hore (Chief Investigator for this study) (Dr Anja Wittkowski, research supervisor)

Clinical Psychology Trainee, The University of Manchester,

School of Health Sciences, Division of Psychology and Mental Health,

2nd Floor Zochonis Building, Brunswick Street Manchester M13 9PL

brendan.hore@postgrad.manchester.ac.uk (please email and the researcher will call you back)

Appendix 8: Consent form

Version 1.3 17/06/17 Women's experience of anxiety during pregnancy: A qualitative study
IRAS project ID: 215719

MANCHESTER 1824
The University of Manchester

Central Manchester NHS University Hospitals NHS Foundation Trust

CONSENT FORM

Participant Identification Number for this study: …….

Title: Women's experience of anxiety during pregnancy: A qualitative study

Principle Investigator: Brendan Hore

Please initial box

1. I confirm that I have read and understood the participant information sheet dated ……..(version …….) for the above study and been given the opportunity to ask questions.	
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.	
3. I agree to take part in the study	
4. I give my consent for the interview to be audio-recorded and the recording written out in full (transcribed)	
5. I give permission for direct quotes from my interview which do not identify me to be used in reports about the research.	
6. I understand any identifiable information will be anonymised and my identity will remain confidential	
7. I understand that data collected during the study, may be looked at by individuals from The University of Manchester, from regulatory authorities or from the NHS Trust, where it is relevant to my taking part in this research. I give permission for these individuals to have access to my data.	
8. I wish to receive a summary of the findings of the study.	
9. I understand that the information collected about me will be used to support other research in the future, and may be shared anonymously with other researchers.	
10. I understand that this research will be published online and available to professionals and the public to read.	

_____	_____	_____
Name of participant	Date	Signature
_____	_____	_____

Name of person taking consent Date Signature

Appendix 9: Consent to contact form

Women's experience of anxiety during pregnancy: A qualitative study IRAS ID: 215719 Version 1 (26/01/17)

Consent to Contact Form

Study Title: Women's experience of anxiety during pregnancy: A qualitative study
Chief Investigator: *Brendan Hore*

Thank you for showing interest in the above study which is described more fully in the Participant Information Sheet. If you are interested in taking part in this study and would like the researcher to contact you, please give your details below. You should only provide the information if you are happy to be contacted in that way..

Please note the following points in relation to the processing of your data:

- Data will be held securely by the research team on behalf of the University of Manchester according to the University's data protection and information security policies.
- Access to the data will be restricted to the research team for the sole purpose of contacting you about this study.
- Your data will not be shared with any third party without your written permission.
- The details collected will only be stored for as long as required to find out if you wish to take part in the study. Once no longer needed, that data will be destroyed securely.
- If you decide to change your mind about being contacted about the study or would like your details to be destroyed you can contact Brendan Hore(Chief investigator) on 07984529100 or email brendan.hore@postgrad.manchester.ac.uk .

Once you have completed your details, please ensure that you have added your signature then tear the bottom half off and post it back in the envelope provided, or give it to your health care professional to return to the research team.

✂----------

I am happy to provide my personal details so that I can be contacted about this study.

Full name	
Signature	
Today's date	

Please complete the details below:

Contact by letter	Address	
	Post Code	
Contact by phone	Preferred contact number	
	When would you prefer to be contacted? (please circle)	Morning/ Afternoon/ Evening/ Don't Mind
	Can a voicemail message be left on this telephone number? (please circle)	Yes / No
Contact by email	Email address	

Appendix 10: Study Poster

Feeling Anxious or Worried?

There is a lack of research and understanding about how women experience anxiety or worry when they are pregnant.

This study aims to help understand how pregnant women experience anxiety and how they communicate this to the people around them.

Are you.....

- Feeling worried or anxious?
- over 18 years old?
- Currently pregnant?
- Able to comprehend and understand English well enough to take part in a study discussion?

Participation involves an hour-long discussion with a researcher about your experience. If you would like more information, please talk to the research midwife or contact the principal investigator, Brendan Hore:

brendan.hore@postgrad.manchester.ac.uk

MANCHESTER 1824
The University of Manchester

Central Manchester NHS
University Hospitals
NHS Foundation Trust

NHS
Greater Manchester
Mental Health
NHS Foundation Trust

Women's experience of anxiety during pregnancy: A qualitative study IRAS ID: 215719 Version 1.1 (06/11/2017)

Appendix 11: Depression, Anxiety and Stress Scale – 21 (DASS)

DASS21

Name: Date:

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you **over the past week**. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

0 Did not apply to me at all
1 Applied to me to some degree, or some of the time
2 Applied to me to a considerable degree or a good part of time
3 Applied to me very much or most of the time

1 (s)	I found it hard to wind down	0	1	2	3
2 (a)	I was aware of dryness of my mouth	0	1	2	3
3 (d)	I couldn't seem to experience any positive feeling at all	0	1	2	3
4 (a)	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5 (d)	I found it difficult to work up the initiative to do things	0	1	2	3
6 (s)	I tended to over-react to situations	0	1	2	3
7 (a)	I experienced trembling (e.g. in the hands)	0	1	2	3
8 (s)	I felt that I was using a lot of nervous energy	0	1	2	3
9 (a)	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10 (d)	I felt that I had nothing to look forward to	0	1	2	3
11 (s)	I found myself getting agitated	0	1	2	3
12 (s)	I found it difficult to relax	0	1	2	3
13 (d)	I felt down-hearted and blue	0	1	2	3
14 (s)	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15 (a)	I felt I was close to panic	0	1	2	3
16 (d)	I was unable to become enthusiastic about anything	0	1	2	3
17 (d)	I felt I wasn't worth much as a person	0	1	2	3
18 (s)	I felt that I was rather touchy	0	1	2	3
19 (a)	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	0	1	2	3
20 (a)	I felt scared without any good reason	0	1	2	3
21 (d)	I felt that life was meaningless	0	1	2	3

Appendix 12: Interview topic guide

Interview topic guide

Introduction

Project Title: Women's experience of anxiety during pregnancy: A qualitative study.

Before you start:

A. Thank the participant for agreeing to be interviewed. To introduce my role, I am training as a clinical psychologist and I have experience working with people with anxiety.
B. The purpose of this research is to explore how pregnant women experience anxiety.
C. Everything you say in this interview will be anonymous and your confidentiality maintained
D. Are you still OK for us to tape record this conversation?
E. Do you have any concerns before we start?
F. Please remember that it is OK to stop at any point, or refuse to answer any questions during this interview
G. The interview should take between an hour and an hour and a half, but if you need a break at any time please let me know.

Opening statement

1. Please can you tell me what anxiety means to you?

Prompt: how do these differ to other thoughts? Why do you have these? Have you always had them? When do you see something as a worry or an anxiety?

Your experience

2. Tell me about your experiences of anxiety during your pregnancy?

Prompt: What things do you worry about? How is your anxiety problematic?

Prompt: What makes your anxiety worse/better? What do you do when worried? Same or different to before pregnancy?

Prompt: History – did they experience anxiety/worry before pregnancy?

Prompt: Any struggles explaining anxiety or times when this has impacted on their lives

Prompt: Does anxiety impact how they feel about your pregnancy?

3.What impact, if any, has being anxious during your pregnancy had on in important things in your life?

Explore: relationships/wellbeing/lifestyle

4. How has being pregnant affected your anxiety and/or worry?

<u>Your communications and support seeking</u>

5.How do you find the experience of communicating your anxiety or worries to others?

Explore:

- How do you let family, friends, healthcare professionals know you are struggling?
- What has helped or not helped?

6. What is your experience of seeking support for your anxiety or worries?

Examples: From whom (Family, healthcare professionals), how sought, when and perceptions of it?

<u>Advice for others</u>

7. Is there any advice that you would give to health professionals when caring for pregnant women with anxieties?

Prompt: Is there anything different you would have liked or seen different from your health care providers?

8. Is there any advice that you would give to other pregnant woman experiencing worry?

Prompt: Anything from your experience that you have learnt that would benefit other pregnant women who might be anxious?

Closing statements

9. Is there anything that we haven't covered already about how you have experienced anxiety during your pregnancy that you would like to talk about before we finish?

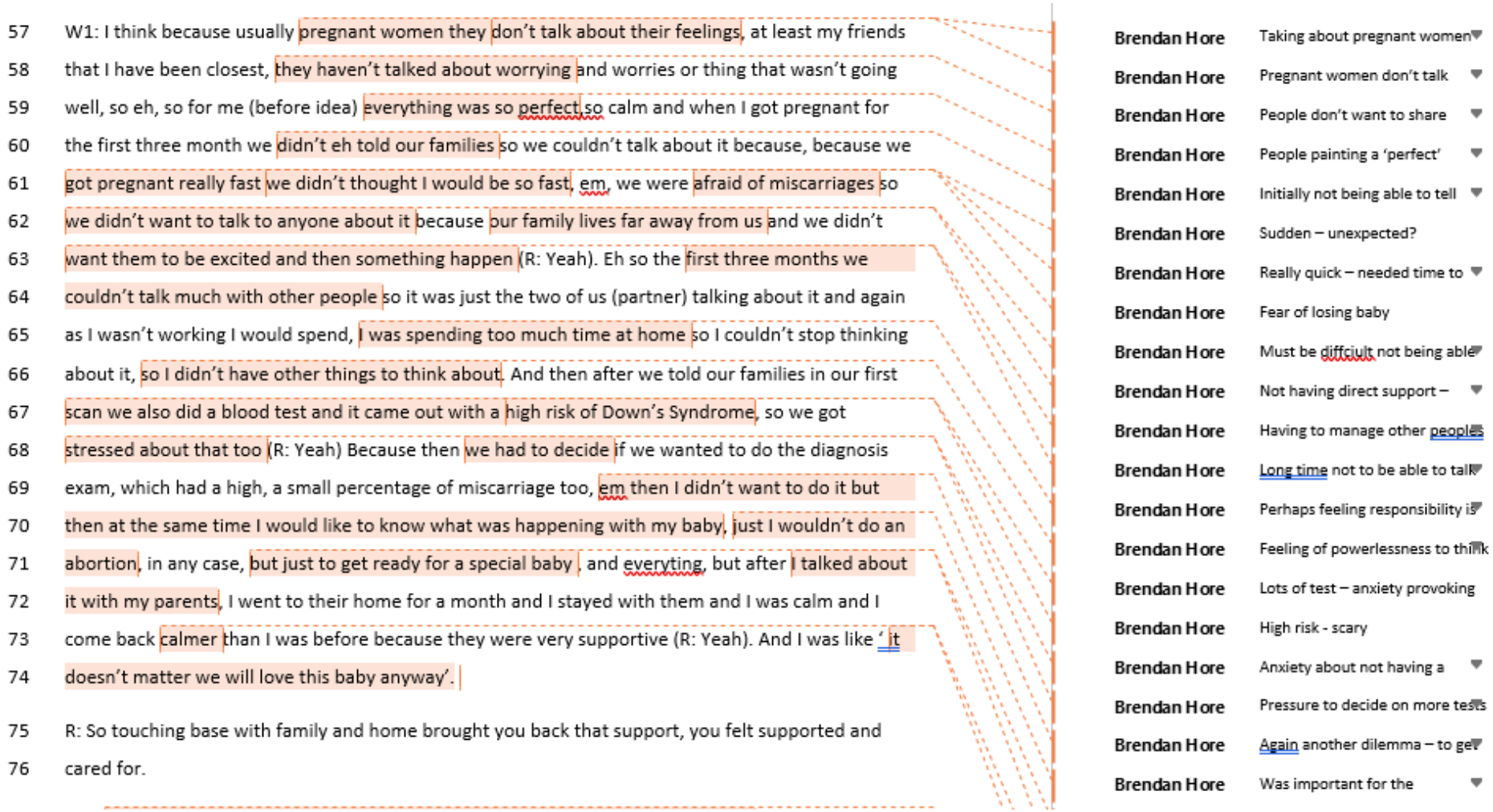
Thank you very much.

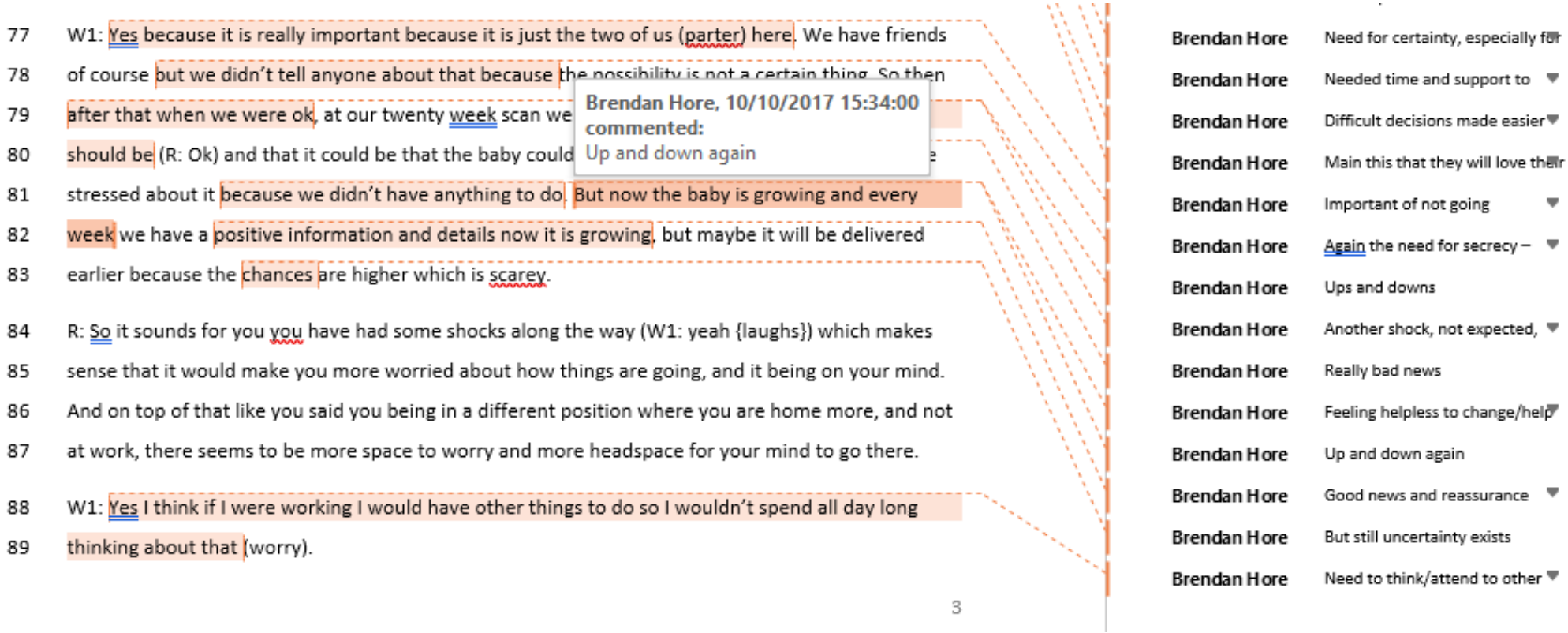
Appendix 13: Demographics questionnaire

PARTICIPANT PERSONAL DETAILS

Participant code	
Age (yrs)	
Trimester of pregnancy	
Ethnic group	
Martial status (married, widowed, divorced, single)	
Number of children	
Occupation current or previous	

Appendix 14: Example of transcript analysis




77 W1: Yes because it is really important because it is just the two of us (parter) here. We have friends
78 of course but we didn't tell anyone about that because the possibility is not a certain thing. So then
79 after that when we were ok, at our twenty week scan we
80 should be (R: Ok) and that it could be that the baby could
81 stressed about it because we didn't have anything to do. But now the baby is growing and every
82 week we have a positive information and details now it is growing, but maybe it will be delivered
83 earlier because the chances are higher which is scarey.
84 R: So it sounds for you you have had some shocks along the way (W1: yeah {laughs}) which makes
85 sense that it would make you more worried about how things are going, and it being on your mind.
86 And on top of that like you said you being in a different position where you are home more, and not
87 at work, there seems to be more space to worry and more headspace for your mind to go there.
88 W1: Yes I think if I were working I would have other things to do so I wouldn't spend all day long
89 thinking about that (worry).
Brendan Hore, 10/10/2017 15:34:00
commented:
Up and down again
3
Brendan Hore Need for certainty, especially for
Brendan Hore Needed time and support to
Brendan Hore Difficult decisions made easier
Brendan Hore Main this that they will love their
Brendan Hore Important of not going
Brendan Hore Again the need for secrecy –
Brendan Hore Ups and downs
Brendan Hore Another shock, not expected,
Brendan Hore Really bad news
Brendan Hore Feeling helpless to change/help
Brendan Hore Up and down again
Brendan Hore Good news and reassurance
Brendan Hore But still uncertainty exists
Brendan Hore Need to think/attend to other