Paternal mental health in the transition to parenthood

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Paternal Mental Health in the Transition to Parenthood

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ABSTRACT

Background and aim

The high prevalence of paternal perinatal depression and the well-established adverse impacts on all family members, highlights the need for interventions which can reduce paternal symptoms of depression and improve family wellbeing. Recent policy to assess the mental health needs of partners of women with perinatal mental health disorders provides a unique opportunity to detect difficulties and intervene to support fathers. However, there are no existing interventions which meet the needs of fathers with mental health problems in the perinatal period. The aim of this thesis is to address this gap in provision by developing an outline for a CBT-based intervention for mild to moderate symptoms of paternal perinatal depression.

Methods

Mixed methods were used to identify the key components and targets of an intervention. This included synthesising quantitative evidence on interventions for paternal perinatal mental health; collecting novel interview data from men with multiple risk factors for poor mental health; gathering the views of clinical and academic experts in the field; and drawing this data together to describe a CBT-based intervention for mild to moderate symptoms of paternal perinatal depression.

Results

Based on data from the studies in this thesis, a detailed description of the intervention was developed, which included consideration of the overall format, aspects of delivery, and main content. Key adaptations to standard CBT models included framing content around fatherhood, focusing on building healthy relationships with the baby and partner, and enhancing flexibility in adherence to masculine norms.

Conclusions

Specific adaptations to existing CBT interventions are needed to meet the needs of fathers with paternal perinatal depression. Research in this thesis indicates that these adaptations

are necessary for improved accessibility, acceptability and engagement across the perinatal period. The intervention outline described in the thesis provides a foundation for further stages of development of the first CBT intervention targeted at fathers with perinatal depression. If found to be effective, this intervention could provide an important source of support for fathers and has the potential to improve wellbeing for all family members.

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STATEMENT OF CONTRIBUTION

I designed all the research questions, completed all the data collection, and conducted all the analyses for the studies in this thesis, with the support of my supervisors. Where a second rater or coder was used, this role was undertaken by my primary supervisor. More details about this are provided in Chapters 2 and 4.

IMPACT AND DISSEMINATION

I have had the opportunity to disseminate my findings to a wide range of audiences, both nationally and internationally, including:

- Presenting at conferences and webinars.
- Publishing outputs in international peer-reviewed journals.
- Publishing outputs as book chapters.

In addition, during the time that I have been undertaking this work, I have had several opportunities to feed the findings into policy and practice. This includes:

- Being commissioned by NHS England to write good practice guidance on supporting partners of women who access perinatal mental health services (Darwin et al., 2021).
- Being part of an Expert Reference Group for the Perinatal Parent Infant Pathway, convened by NHS England as part of the perinatal transformation programme.
- Feeding into discussions with the lead domestic violence advisor for the National Council of Chief Police Officers.

Below is a summary of the outputs and impact for each study.

Introductory chapter

Parts of Chapter 1 have been used in the following book chapter:

Domoney, J., Iles, J. & Sethna, V. (2021) Fathers and Partners Mental Health in the Perinatal Period. In McDonald, L., Cantwell, R. & and Jones, I. (Eds.) *Seminars in Perinatal Psychiatry.* CUP (In press)

Study 1 – Systematic review

Conference publications

Domoney, J. & Trevillion, K. *Psychosocial intervention for fathers in the perinatal period: A review of the literature.*

- Poster presentation. International Marce Society Conference for Perinatal Mental Health, Bangalore, September 2018.

Study 2 – Qualitative interview study

Peer reviewed publication

Domoney, J, Trevillion, K. Breaking the cycle of intergenerational abuse: A qualitative interview study of men participating in a perinatal program to reduce violence. *Infant Mental Health J*. 2020; 116. https://doi.org/10.1002/imhj.21886

Conference publications

Domoney, J. & Trevillion, K. *Becoming a father in the context of domestic violence: Hopes and challenges.*

- Symposium Presentation, European Conference on Domestic Violence, Oslo, September 2019
- Symposium Presentation, International Association of Women's Mental Health, Paris, March 2019
- Symposium Presentation International Marce Society Conference for Perinatal Mental Health, Bangalore, September 2018.
- Symposium Presentation, World Association of Infant Mental Health, Rome, June 2018.

Study 3 – Delphi survey

Peer reviewed publication

Domoney, J., Trevillion, K., & Challacombe, F. L. (2020). Developing an intervention for paternal perinatal depression: An international Delphi study. Journal of Affective Disorders Reports, 2, 100033. https://doi.org/10.1016/j.jadr.2020.100033

Table of Abbreviations

ACE	Adverse Childhood Experience
ADHD	Attention Deficit and Hyperactivity Disorder
CASP	Critical Appraisal Skills Programme
CBT	Cognitive Behavioural Therapy
COREQ	Criteria for reporting qualitative research
DVA	Domestic Violence and Abuse
EPDS	Edinburgh Postnatal Depression Scale
HIC	High Income Country
IAPT	Improving Access to Psychological Therapies
IPT	Interpersonal Therapy
LGBTQ+	Lesbian, Gay, Bisexual, Trans, Queer
NICE	National Institute for Clinical Excellence
NHS	National Health Service
PMH	Perinatal Mental Health
PND	Perinatal depression
PPND	Paternal perinatal depression
PPI	Patient and Public Involvement
PTSD	Post-Traumatic Stress Disorder
NICU	Neonatal intensive care unit
RCT	Randomised Controlled Trial
SES	Socio Economic Status

Table of definitions

Domestic violence and abuse	Any incident or pattern of incidents of controlling, coercive, threatening behaviour, violence or abuse between those aged 16 or over who are, or have been, intimate partners or family members regardless of gender or sexuality. The abuse can encompass, but is not limited to: psychological, physical, sexual, financial, and emotional.
Parity	The number of pregnancies carried by a woman.
Perinatal period	The period from conception to 12 months postpartum
Primiparous	Pregnant for the first time
Psychosocial intervention	Interpersonal or informational activities, techniques, or strategies that target biological, behavioural, cognitive, emotional, interpersonal, social, or environmental factors with the aim of improving health functioning and well-being.
Targeted intervention	Interventions which are aimed at families with specific characteristics or needs.
Universal intervention	Interventions which are accessible to all families

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CHAPTER 1 - INTRODUCTION

Having a baby can bring enormous joy and pleasure to many new parents. However, for a significant number of families the perinatal period, which, in the UK, refers to the time from conception to 12 months postpartum, can also bring considerable distress and worry. Perinatal mental health problems, which include any mental health difficulty present in this period, are now recognised as a major public health issue which can have a significant and lasting impact on the whole family (Bauer, Parsonage, Knapp, Lemmi, & Adelaja, 2014).

While difficulties related to mothers' experience of the transition to parenthood have received a significant amount of attention in both research and policy, leading to improvements in screening and treatment programmes, the impact of this transition on fathers has largely been overlooked.

However, in recent years, fathers' mental health has increasingly been a focus of interest as studies have demonstrated the high prevalence of mental health disorders amongst fathers and the impact that these disorders can have on family wellbeing. Around 10-12% of fathers are thought to have symptoms of depression and anxiety (Leach, Poyser, Cooklin, & Giallo, 2016; Paulson & Bazemore, 2010), and research indicates that these disorders can have an adverse effect on child outcomes, being associated with behaviour problems, lower academic achievement and poorer mental health across childhood and adolescence (Ramchandani et al., 2011; Ramchandani, Stein, Evans, & O'Connor, 2005; Sethna, Murray, Netsi, Psychogiou, & Ramchandani, 2015). Poor paternal mental health is also linked with worse mental health in women, as well as increases in couple conflict (Giallo et al., 2013; Paulson, Bazemore, Goodman, & Leiferman, 2016).

Recognition of the concordance of maternal and paternal mental health and an understanding of the detrimental effects this can have on child development, has led to the introduction in England of mental health assessment for fathers in cases where the mother is receiving support from specialist perinatal mental health services (NHS England, 2019). This provides an opportunity to identify and support fathers who have mental health needs, and to improve outcomes for the whole family. Similarly, there has been a call from services across the care pathway to extend this provision to partners of women in primary care services, so that all

partners have their mental health assessed, bringing them in line with maternal mental health assessment (e.g. Baldwin, 2020). In this context, the need for evidence-based interventions for fathers with mental health difficulties, which are feasible to deliver and acceptable to the target population, is pressing. Developing such an intervention is the topic of this thesis.

In this introductory chapter I summarise data related to paternal perinatal depression (PPND), the most widely studied paternal mental health disorder, including prevalence, risk factors, impacts, and issues around engagement with interventions (Chapter 4 summarises qualitative literature related to fathers mental health and so is only briefly discussed in this chapter). Following this, I describe the main theoretical frameworks that underpin the studies in this thesis and set out the aims of the thesis.

1.1 Conceptions of fatherhood

Over the past 50 years, the role of fathers in Western cultures has changed substantially. In the first half of the 20th century, influential thinkers in the world of child development, such as Sigmund Freud and John Bowlby, relegated the role of fathers in their children's lives to that of a subsidiary to the influential mother-infant relationship, there to provide 'economic and emotional support to the mother' (Bowlby, 1953 pg 16 ; Freud, 1949). However, Michael Lamb's seminal paper in 1975 (Lamb, 1975) positioned fathers as the forgotten contributors to child development, challenging the view that fathers are not important to their children's developmental outcomes and suggesting new directions for research to explore their influence. Since then, there have been an increasing number of studies investigating the role of fathers, leading to an understanding that fathers have significant, complex and multidimensional functions in their children's development (Sarkadi, Kristiansson, Oberklaid, & Bremberg, 2008; Sethna et al., 2017). Father involvement has been linked with a range of child outcomes, including mental health, academic achievement, the quality of peer relationships and externalising behaviour (Ramchandani et al., 2011; Ramchandani et al., 2005; Sethna et al., 2017), and this has begun to be reflected in policy with the introduction of shared parental leave in the UK in 2015 (Gov.UK, 2015).

Alongside this, family structures and gender relationships have evolved. With advances in women's rights and a greater number of women entering the workplace, men are increasingly involved in childcare, including as primary care givers, and there is more emphasis on the

importance of being an involved father (Gillies, 2009). For example, forty years ago, men were not permitted to attend births in hospitals (Draper, 2003); now over 90% of fathers attend the birth in the UK (Burgess & Goldman, 2018). Likewise, British fathers' care of their children has increased substantially since the 1970s, from around 20 minutes per day to an average of 90 minutes (Altintas & Sullivan, 2017).

Despite this increase in involvement, many men still face confusion and uncertainty in the transition to parenthood. Becoming a parent can be extremely stressful for both parents; increased responsibility, changes in relationships, financial strain, lack of sleep and worry about the health of the baby can all contribute to feelings of being overwhelmed. For men, distress and confusion may be compounded by the need to construct their identity as a father amidst a rapidly changing social reality and unhelpful stereotypes and media depictions of fathers as irresponsible or incompetent (Gregory & Milner, 2011). Furthermore, alongside the modern-day concept of the 'involved father', the reality of social norms and structures, for example having to return to work soon after the baby is born, can serve to keep men in more traditional roles and continue their marginalisation (Machin, 2015).

However, the transition to parenthood is also an opportunity to find new meanings and reasons for being. Indeed, the antenatal period has been defined by some authors as a 'teachable' moment when fathers may be open to learning and receptive to information and support (Da Costa et al., 2017; Venning et al., 2018). Fathers may have multiple opportunities for change and growth including, for example, challenging rigid adherence to masculine norms, deepening the partner relationship, and learning about themselves. The capacity to contribute and shape the infant's experiences may help fathers to see depth in the role and empower men to embrace this new phase of life (Fletcher, Knight, Macdonald, & StGeorge, 2019).

In this context, interventions for fathers' mental health have a role not only in reducing symptoms, but also in supporting men to navigate their new role and harness opportunities for positive growth and change.

1.2 Fathers and other partners

In the literature on paternal mental health, the term 'father' is often not well defined but may include both resident and non-resident males (i.e. living in the same household as the child or

not) who are the biological parent of the infant, as well as, in some cases, stepfathers. And what of other partners and family members? There is little evidence on the experiences of lesbian, gay, bisexual, transgender and queer (LGBTQ) people regarding mental health in the transition to parenthood. Data is often not collected on the gender or sexual orientation of people who are pregnant or their partners, and so the number of LGBTQ people having babies is unknown. There may be unique risk factors for LGBTQ parents related to stigma, lack of legal recognition as parents, and heteronormative health services (Alang & Fomotar, 2015). There may also be some specific features in the mental health presentation of male partners. Studies on men's mental health suggest that men may express distress, including depression, differently to women, for example through symptoms such as hostility, conflict and anger rather than sadness or apathy, and by disengaging through the use of substances or escape activities such as sports or overwork (Cochran & Rabinowitz, 2003; McCoy, 2012). Masculine socialization and an expectation to adhere to a narrow range of masculine norms may exert particular pressures on men which impact on the development of psychopathology (Berke, Reidy, & Zeichner, 2018). Therefore, the data presented here and in the remainder of this thesis focuses on male partners of childbearing women due to some of the unique features of mental health presentations in men and the current lack of data on other partners.

1.3 Definitions of perinatal depression

According to the major diagnostic systems used in the UK (American Psychiatric Association, 2013; World Health Organisation, 2018), perinatal depression is an episode of major depression which begins during pregnancy or in the four weeks following delivery. However, in practice in the UK, the perinatal period is usually defined as the time from conception to 12 months postpartum, with depression during this period being classed as perinatal depression. That is also the definition used in this thesis.

Key symptoms for a diagnosis of major depression are low mood and loss of interest or pleasure in daily activities, which represents a change from normal mood. In addition, fatigue/loss of energy, changes in sleep or appetite, poor concentration, indecisiveness, feelings of worthlessness or guilt, psychomotor agitation or retardation, and suicidal thoughts also indicate a depressive episode. Symptoms should be associated with clinically significant distress or impairment in functioning and should be present most days for at least two weeks to fulfil

criteria. Minor or mild depression is defined by having fewer symptoms, and only minor functional impairment.

For mothers, symptoms of perinatal depression are often identified by the use of brief self-report questionnaires, based on the diagnostic criteria above, alongside an assessment of psychosocial factors. In the maternal mental health literature, the most commonly used measure is the Edinburgh Postnatal Depression Scale (EPDS; Cox, Holden, & Sagovsky, 1987). This is a 10-item self-report measure, which excludes somatic symptoms which are common in the postnatal period, such as changes in appetite, sleep and energy levels. It has been validated for use across the perinatal period and has a cut-off of 13 for women.

For fathers, things are a little more complicated. Some colleagues and I recently undertook an evidence synthesis of the performance of mental health screening tools for fathers (Darwin et al., 2020). The most frequently used tool is the EPDS. However, there is considerable debate about the appropriate cut-off for fathers. This has led to researchers recommending a variety of cut-off points: ≥ 11 for depression and ≥ 9 for depression/anxiety (Edmondson, Psychogiou, Vlachos, Netsi, & Ramchandani, 2010); ≥ 10 for depression and ≥ 6 to avoid missing 'any distress' (including depression and anxiety) (Matthey, Barnett, Kavanagh, & Howie, 2001); ≥ 12 for major depression and ≥ 9 for minor/major depression (Massoudi, Hwang, & Wickberg, 2013). One difficulty, as noted above, may be that men express depression differently to women and therefore endorse different items on questionnaires. This has led some researchers to develop male-specific measures for depression in fathers (Madsen & Juhl, 2007; Matthey & Della Vedova, 2020), although these have yet to be validated against diagnostic interviews. The evidence synthesis concluded that there was not currently enough evidence to recommend any specific tool and that further studies are needed to improve the accuracy and effectiveness of mental assessment for fathers in order to identify those in need of support.

It is not an aim of this thesis to determine the best way to identify depression in fathers. However, it is useful to be aware of the complications of this as it will be important for future implementation of referral pathways and interventions. These issues are explored further in Chapter 8.

1.4 Prevalence

Recent research indicates that around 10% of fathers are affected by perinatal depression (Cameron, Sedov, & Tomfohr-Madsen, 2016; Paulson & Bazemore, 2010) with these figures growing substantially to anywhere between 25 and 50% where a partner is also experiencing depression (Paulson et al., 2016). This is significantly higher than that reported in men in studies of the general population (approximately 4%, (Kessler, Berglund, & Demler, 2014)), suggesting that fatherhood may be a time of increased vulnerability. In addition, the rate of men's depression during pregnancy is similar to that during the postnatal period (Cameron et al., 2016) indicating the continuation of symptoms throughout the perinatal period.

1.5 Risk factors

Having a baby and becoming a parent is a significant time of adjustment and change for men as well as women (Goodman, 2004). Men can be exposed to a number of stressors, including changes in sleep patterns, new roles and responsibilities, changes in social support networks and changes to the relationship with their partner, including potentially feeling excluded from the process of mother-infant bonding (Darwin et al., 2017; Edhborg, Carlberg, Simon, & Lindberg, 2016). They can have similar worries and fears to women around the health of their infant and their adequacy as a parent and may receive mixed messages from society about their role and responsibilities. These changes can overwhelm men's usual coping resources, creating vulnerabilities to poor mental health. Both quantitative and qualitative data on risk factors for paternal depression are summarised here.

1.5.1 Psychological risk factors

A key risk factor for paternal postnatal depression includes having a history of depression prior to the partner's pregnancy and experiencing symptoms of depression or anxiety in the prenatal period (Paulson et al., 2016), each of which can increase the chances of postnatal depression by between 2 and 4 times (Ramchandani et al., 2008). In some cases this is because the transition to becoming a father acts as a stressor or trigger for men with an existing vulnerability to depression, but there can also be a strong continuity of depression from the prenatal period on through the postnatal period (Paulson et al., 2016). In several metasyntheses of qualitative research exploring the challenges of the transition to fatherhood (Chin, Hall, & Daiches, 2011;

Goodman, 2005; Kowlessar, Fox, & Wittkowski, 2015; Steen, Downe, Bamford, & Edozien, 2012) the themes of uncertainty, fear and exclusion are common. For those with a history of depression or additional stressors, these challenges may lead to a deterioration in mental health.

In the men's mental health literature, adherence to masculine norms is associated with a higher likelihood of experiencing depressive episodes (Oliffe & Phillips, 2008). In the perinatal period, typical masculine traits such as independence, self-reliance and an expectation to provide for the family can lead to lack of help-seeking, ignoring negative emotions, and pressure to manage the increased responsibility of having a baby without support. Men report trying to meet expectations of being both a father and a man, juggling both personal and work-related contexts, and having to deal with economic pressures as well as the emotional needs of the family (Baldwin, Malone, Sandall, & Bick, 2019; J. Y. Lee, 2019). In the context of internalised masculine stereotypes and associated gender role stress, this can lead to self-stigma and shame, which exacerbate stress and vulnerability to poor mental health (Dye, 2020).

Adverse childhood experiences, such as parental mental health disorders, domestic violence, parental substance use, separation and divorce, are risk factors for mental health difficulties in adulthood (Hughes et al., 2017). The transition to parenthood can be a trigger for poor mental health in those with such early experiences. In pregnancy, memories of poor or traumatic early experiences can be triggered in expectant fathers, leading to worry and stress (Tolman & Walsh, 2020) and postnatally, men may experience anxiety about the impact of their early experiences on their own parenting (Domoney & Trevillion, 2020).

1.5.2 Social risk factors

Being unemployed, low job quality, and financial hardship are associated with worse postnatal paternal mental health (Bruno et al., 2020; Giallo et al., 2013). In particular, jobs which have poor working hours, low job security and poor access to paid family friendly leave lead to greater odds of psychological distress. These factors can lead to worries about financial stability and the ability to provide for the family, and may threaten fathers' sense of role competence (Koh, Chui, Tang, & Lee, 2014; J. Y. Lee, 2019). Low levels of education is also a risk factor for psychological distress which frequently goes hand in hand with poor job quality (Dudley, Roy, Kelk, & Bernard, 2001; Giallo et al., 2013).

Lack of social support is a commonly cited risk factor for perinatal mental health disorders for both men and women (Boyce, Condon, Barton, & Corkindale, 2007; Howard et al., 2014). A report by Movember suggested that men may not recognise the importance of close relationships for their wellbeing and may lose friendships when they enter fatherhood, increasing their risk for poor mental health (Movember, 2019). They may typically rely on their spouses for support, which becomes problematic when mothers are taking care of newborns and not able to offer the same levels of support as usual (Pilkington, Milne, Cairns, Lewis, & Whelan, 2015). Conversely, social support, including partner support, is a highly protective factor for depression in the perinatal period for both men and women (Matthey, Barnett, Ungerer, & Waters, 2000). Social support is likely to have been a particular challenge for parents during the covid pandemic, with reductions in support with infant care provided by family members, as well as a lack of informal peer support from other new parents.

Feelings of exclusion by health services may also contribute to low mood and stress. Studies have found that fathers feel ignored and side-lined by professionals within the perinatal health care system (Gervais, de Montigny, Lacharité, & St-Arneault, 2016), and may be 'unintentionally marginalised by perinatal health services and by the maternal focus of social practices surrounding new babies' (Fletcher, Matthey, & Marley, 2006; p.461). A meta-synthesis of 23 qualitative studies of fathers' experiences of maternity care found that they feel left out, like 'bystanders' or 'invisible parents' (Steen, Downe, Bamford, & Edozien, 2012).

1.5.3 Pregnancy and infant related risk factors

A history of pregnancy loss is associated with paternal mental health disorders. This experience can increase worries about the viability of the current pregnancy, as well as triggering symptoms of grief (Domoney & Trevillion, 2020). Unplanned pregnancy can also lead to increased distress (Boyce et al., 2007) as men may struggle to bond with the unborn baby, not knowing what to expect of their role and feeling unprepared (Baldwin, Malone, Sandall, & Bick, 2018). The pregnancy can also trigger memories of their own experiences of being parented. While this can potentially motivate men to make changes to prepare for the arrival of the baby, it can also lead to fear, worry and concern about their ability to parent (Tolman & Walsh, 2020). Men also express anxiety about the safety of their partner and baby during the birth, which can be exacerbated by a lack of knowledge about the process of labor (Hanson, Hunter, Bormann, & Sobo, 2009).

Postnatally, men frequently report feeling excluded from the relationship with the baby and may struggle to find a role (Baldwin et al., 2019). The father-infant bond may develop more gradually than the mother-infant relationship, in part because fathers typically spend less overall time with their infants, compared to mothers. This may contribute to a sense of anxiety and lower self-confidence in relating and caring for the infant and may mean that the father receives less positive reinforcement in the form of smiles from their baby and may perceive themselves to have lower levels of parenting efficacy (De Montigny, Lacharité, & Devault, 2012). Having to return to work soon after the birth can increase this sense of exclusion and lead to frustration (Dallos & Nokes, 2011).

Infants with sleeping or feeding difficulties or who cry a lot can be perceived as 'difficult' and are associated with increased parental stress (van den Berg et al., 2009).

1.5.4 The couple relationship and mental health

There are significant stressors in the perinatal period which put strain on relationships as couples shift their time and energy away from a focus on their romantic relationship to parenting and child rearing. They may experience uncertainty and worry about their new roles and responsibilities, must cope with a lack of sleep leading to fatigue, and have a substantial increase in household labour. This can lead to changes in expectations of partner support, whilst at the same time having less time to spend on each other.

Relationship quality is known to decline across the transition to parenthood, with longitudinal studies showing up to 70% of couples reporting increases in conflict and decreases in relationship satisfaction following birth (Cowan & Cowan, 2000; E. Lawrence, Rothman, Cobb, Rothman, & Bradbury, 2008). This decline has been demonstrated across a range of ethnic backgrounds and in same-sex couples, and research suggests it is rather persistent across the years following birth (Doss, Rhoades, Stanley, & Markman, 2009; Goldberg & Sayer, 2006).

A meta-synthesis of 22 qualitative studies on men's mental health during the transition to parenthood identified that deterioration in the couple relationship was a common experience following the birth, including increased arguments, lack of support, and reduced sexual contact (Baldwin et al., 2018). Men report that the stress of having a baby means that the relationship

becomes strained, there are more misunderstandings, problems remain unresolved, and communication is poor (Edhborg et al., 2016).

Similarly, for women, qualitative literature indicates that partners may be perceived as not offering sufficient support in terms of validating feelings, taking the initiative and being more involved in infant care (Haga, Lynne, Slinning, & Kraft, 2012). Women note there is less time to maintain their relationship and they may also begin to feel irritation and disappointment at a perceived lack of support and involvement by the father (Edhborg, Friberg, Lundh, & Widström, 2005).

Partner support and relationship satisfaction are strong protective factors against perinatal anxiety and depression for both mothers and fathers (Giallo et al., 2013; Pilkington, Milne, et al., 2015). Supportive relationships facilitate an individual's capacity to adjust to significant life events by buffering against stress (Figueiredo et al., 2008). Conversely, low partner support, couple conflict and low levels of relationship satisfaction are consistently cited as risk factors for perinatal depression in both men and women (Giallo et al., 2013; Howard et al., 2014). Furthermore, there are significant correlations between maternal and paternal perinatal depression (Paulson & Bazemore, 2010), which is likely explained by a combination of partner relationship dysfunction, and shared contextual factors such as socio-economic difficulties (Dudley et al., 2001).

For some couples, the transition to parenthood may be experienced in the context of intimate partner violence. In high-income settings the prevalence of domestic violence and abuse (DVA) in pregnancy ranges between 4 and 8% (Devries et al., 2010). While there is mixed evidence as to whether rates of DVA increase in the perinatal period, it is clear that pregnancy does not prevent the occurrence of violence and many women report being victims for the first time during pregnancy (García-Moreno, Jansen, Ellsberg, Heise, & Watts, 2005). Being a victim of DVA in pregnancy or the postnatal period is associated with postnatal maternal mental health problems (Howard, Oram, Galley, Trevillion, & Feder, 2013). Furthermore, mental health disorders are associated with the perpetration of DVA (Oram, Trevillion, Khalifeh, Feder, & Howard, 2014). Issues around mental health and the perpetration of DVA in the perinatal period are explored further in Chapter 4 and 5.

1.6 Impacts

Paternal depression can lead to a range of adverse outcomes for men, including poor health behaviours such as increased use of alcohol and substances, and an increased risk of self-harm and suicide (Wilhelm, 2009). Anger and irritability, which are common symptoms of depression for men (Winkler, Pjrek, & Kasper, 2005) can lead to the breakdown of close relationships, as can social withdrawal and isolation.

Studies often find a concordance of perinatal depressive symptoms between parents (Paulson et al., 2016), and the co-occurrence of depression in both mother and father is often associated with deterioration in the couples' relationship. These factors therefore represent risks for the mother's mental health and wellbeing. Where fathers use avoidant coping strategies such as withdrawal and increased time at work or outside of the home, this puts increased parenting pressure on mothers and poor support with family tasks and duties (Edhborg et al., 2005; Haga et al., 2012).

The most well-researched impacts of paternal depression are those that affect the child. Paternal depression has been found to negatively impact on a wide range of child outcomes, including emotional and behavioural problems, poorer cognitive development, lower social competence and impaired peer relationships (Hanington, Ramchandani, & Stein, 2010; Ramchandani et al., 2008; Ramchandani et al., 2005). For example, children whose fathers have depression in the perinatal period are found to have approximately a doubling of their risk of behavioural problems in childhood, over and above maternal depression (Ramchandani et al., 2005). Furthermore, impacts can last into adolescence, with postnatal paternal depression being associated with offspring depression symptoms at 18 years (Gutierrez-Galve et al., 2019).

1.6.1 Mechanisms of risk for children

The mechanisms for the transmission of risk from depressed fathers to their children include both direct and indirect effects (Gutierrez-Galve, Stein, Hanington, Heron, & Ramchandani, 2015). Fathers with depression tend to be more withdrawn in their interactions with infants (Field, 2010; Sethna et al., 2015) and these repeated, disengaged interactions with infants as young as 3 months of age have been associated with an increased risk of later behavioural problems and poorer cognitive development (Ramchandani et al., 2013; Sethna et al., 2017). Paternal depression is also associated with negative parenting behaviours such as hostility and

intrusiveness, and fewer positive behaviours such as warmth and responsiveness (Wilson & Durbin, 2010). Parenting behaviour thus represents a direct way that risk can be transmitted.

In terms of indirect impacts, the co-occurrence of depression in both mothers and fathers leads to poor quality couple relationships (Paulson et al., 2016), impacting on the mother's mood and wellbeing, and therefore having an impact on the emotional environment in which a child is growing and developing through increased conflict and reduced parental cooperation. Indeed, studies exploring mediators of the effects of paternal depression on child outcomes found that couple conflict partly mediates the relationship between fathers' mental health and offspring development (Gutierrez-Galve et al., 2015; Hanington, Heron, Stein, & Ramchandani, 2012).

Aspects of the couple relationship such as lack of mutual support and negative communication are associated with poor parenting practices such as insensitivity, harsh discipline, and low expression of affection (Petch & Halford, 2008). These practices are, in turn, associated with risk of adverse outcomes for the child including mental health disorders, poor social competence, and effects on cognitive development (Murray, Fearon, & Cooper, 2015; Sethna, Murray, Edmondson, Iles, & Ramchandani, 2018).

In addition, couple relationship satisfaction partly predicts the quality of co-parenting (Gordon & Feldman, 2008). Co-parenting refers to the way that couples coordinate and support each other in their parental roles (McHale & Irace, 2011) and it may be more strongly related to parenting and child outcomes than the quality of the couple relationship itself (Margolin, Gordis, & John, 2001). Therefore, the co-parenting relationship represents an important causal mechanism on the pathway to child developmental outcomes. Infants require consistent, predictable responses from caregivers to help regulate emotions and behaviour, and so disparate or contradictory child-rearing practices may impact on the development of self-regulation (McHale, Negrini, & Sirotkin, 2019).

Parenting and co-parenting practices are impacted by DVA and, where children are exposed to DVA, there are multiple negative consequences across the lifetime. DVA in pregnancy increases the risk of poor obstetric outcomes such as low birth weight, pre-term birth and miscarriage (Feder et al., 2009), and is associated with later child behavioural problems (Flach et al., 2011), while exposure during childhood is linked with both behavioural and emotional problems (Evans, Davies, & DiLillo, 2008). DVA can undermine parents' ability to provide

the consistent, sensitive and responsive caregiving that babies and young children need. For victims, parenting in these circumstances may be unpredictable, unresponsive or frightening. This is especially the case if parents did not receive this level of caregiving when they were children and therefore lack models of safe, responsive relationships (Howarth et al., 2016; National Scientific Council on the Developing Child, 2012). Men who are violent have been shown to be less sensitive and responsive to their children's needs, to show less affection, and perceive their children more negatively (Holt, 2015; Stewart & Scott, 2014).

A summary of these risk factors and impacts can be seen in Figure 1, which provides a model of risk pathways to poor outcomes. In this figure, different time points are highlighted from left to right, including pre-existing risk factors for PPND, risk factors which may be present during pregnancy and in the postpartum, and potential intermediate and longer-term outcomes. In addition, three pathways are identified: the individual pathway indicates factors related to the father; the infant pathway indicates factors related to parenting; the relationship pathway indicates factors related to the couple relationship and wider social networks. The relationships between these variables and paternal mental health are complex and bi-directional and suggest that multiple factors may need to be targeted in prevention and intervention efforts.

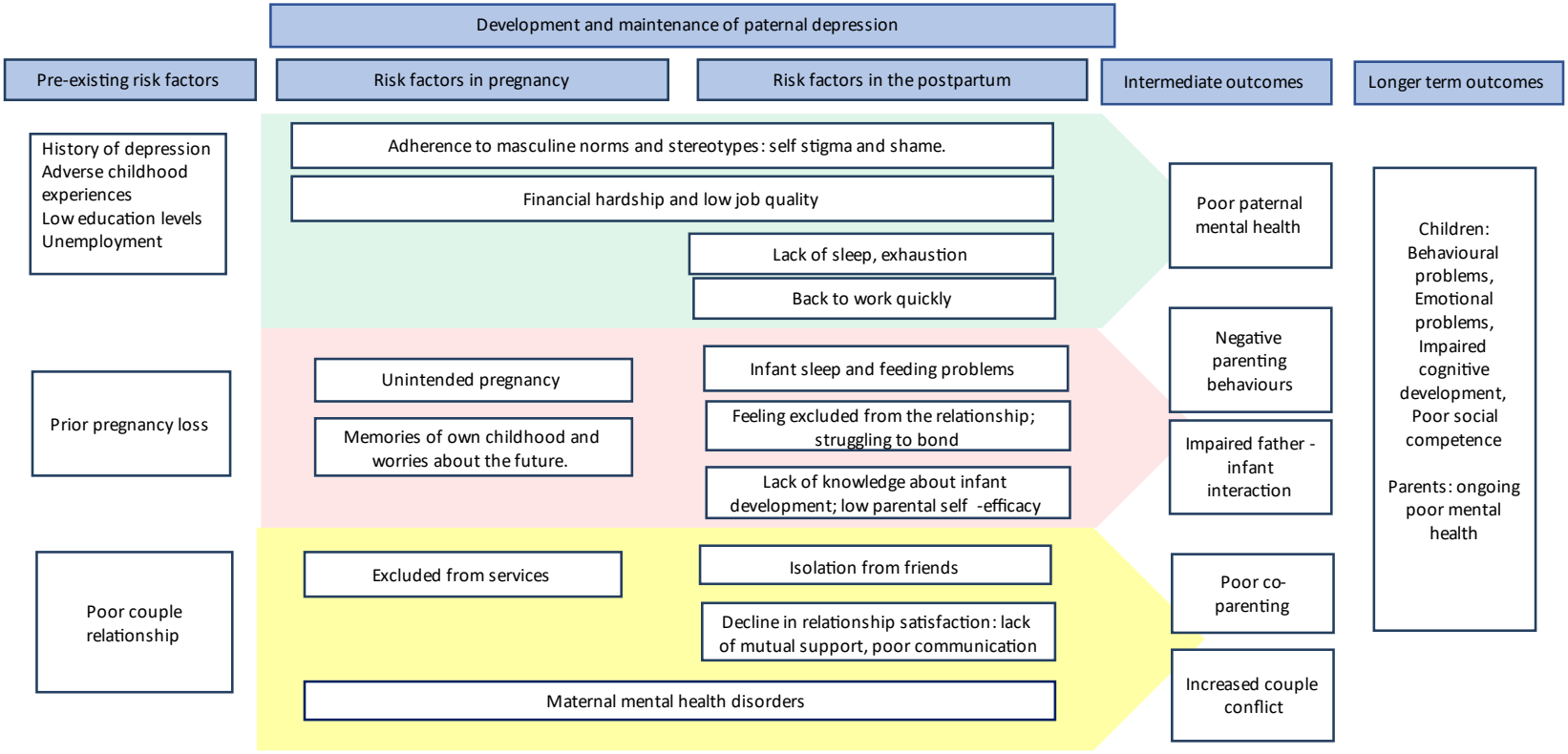


Figure 1 - Model of risk pathways for paternal depression and family outcomes

1.7 Paternal engagement and inclusion

Given the prevalence and impacts of PPND, there is a need to provide accessible, father-focused interventions, which can reduce the impact of mental health difficulties on fathers and improve outcomes for the whole family. However, despite robust evidence of the adverse impact of PPND, fathers are seldom engaged in perinatal mental health services or treatments and are less likely to seek support than women. A key factor identified in the literature is the reluctance of health-care and mental health providers to adapt practices to encourage the inclusion of fathers (Panter-Brick et al., 2014; Whitelock, 2016). Studies have found that fathers often feel ignored and side-lined by professionals within the perinatal health care system (Fletcher, Matthey, & Marley, 2006; Gervais, de Montigny, Lacharité, & St-Arneault, 2016) and a meta-synthesis of 23 qualitative studies of fathers' experiences of maternity care in high income countries found that they feel left out, like 'bystanders' or 'invisible parents' (Steen et al., 2012).

Furthermore, fathers are less likely to attribute distress to mental health, as well as potentially feeling they are not legitimate users of services at this time (Darwin et al., 2017). Indeed, a survey of fathers' mental health help-seeking identified that only 3.2% of fathers sought counselling, and fathers reporting higher levels of distress were less likely to see help (Isacco, Hofscher, & Molloy, 2016). A further issue is that men may struggle to express their needs in words (Doucet, Letourneau, & Blackmore, 2012) or express it in different ways. For example, men are typically more willing to acknowledge fatigue, irritability, anhedonia, and sleep disturbances rather than reporting sadness, worthlessness, or guilt (Garfield et al., 2014). They may also be more likely to withdraw socially or abuse substances, rather than talk about how they feel or cry (Wilhelm, 2009).

In England, the NHS Long Term Plan (2019), which sets out the vision for developments in the NHS over the next 10 years, included several policies related to perinatal mental health services. This included a commitment to ensure that partners of women accessing specialist perinatal mental health services receive evidence-based assessment of their mental health and are signposted to support as required. The focus on partners of women who are accessing services was based on evidence that these individuals are at a higher risk of suffering from mental health disorders themselves (Paulson et al., 2016). However, there has been a call from services across the care pathway to extend this provision to partners of women in primary care

services, so that all partners have their mental health assessed, bringing them in line with maternal mental health assessment. The way that this assessment should take place is currently in development. Given the issues with paternal engagement described above, it is likely that adaptations will need to be made in order to overcome some of the barriers.

In March 2019, some colleagues and I were commissioned by NHS England to develop a good practice guide for involving and supporting partners of women accessing specialist perinatal mental health services (Darwin et al, 2021). As part of this work, we undertook a mixed-methods evidence synthesis on the assessment of mental health of fathers, other co-parents and partners in the perinatal period (Darwin et al., 2020). This study identified a number of service level, practitioner-level and patient-level factors which impact on the acceptability of assessment across community and clinical settings. These included, for example, the remit and culture of the service being geared towards women; the need for training and supervision; workload and time pressures; knowledge, skills and confidence of staff; partners' concerns about compromising support for women and the purpose of assessment; and gendered perspectives on mental health alongside an inability to recognize symptoms.

As well as these challenges in identification and assessment, a key factor was also the lack of onward referral routes for those identified as needing support. Indeed, as assessment for partners begins to be adopted across perinatal mental health services over the coming years, there is an urgent need to ensure that services can provide evidence-based interventions, which are acceptable and feasible for this population.

1.8 Interventions for fathers

A review from 2016 of the effectiveness of perinatal interventions for paternal mental health symptoms found that there were no interventions targeted at men with identified mental health needs (Rominov, Pilkington, Giallo, & Whelan, 2016). This is a significant gap in the literature, and one that this thesis will seek to address (see Chapter 2 and 3). However, several studies in Rominov et al's review measured symptoms of paternal mental health, and the review explored the impact of a range of intervention types. They found that the use of antenatal classes as a way to target fathers and prepare them for the transition to parenthood had little impact on their mental health (Rominov et al., 2016). Similarly, fathers report that antenatal education provided in maternity services does not provide enough information about changes in the postnatal period, including the impact of lack of sleep on mood, and the challenges in the

parenting partnership (Pålsson, Persson, Ekelin, Hallström, & Kvist, 2017). In the same review, co-parenting or couple interventions did not appear to impact on mental health outcomes for fathers. Instead, qualitative data suggests that fathers want to have information that is father-specific which focuses on their needs and concerns (Allen, 2010; Fletcher & StGeorge, 2011), and prefer the idea of something offered separately to the mother (Everingham, Heading, & Connor, 2006; Letourneau et al., 2012). A survey of 174 Australian fathers (Da Costa et al., 2017), approximately 20% of whom reported perinatal psychological distress, asked men about their preferences for information related to pregnancy and parenting. Highly rated topics included information about infant care, how to support the partner during the birth, ways to improve the partner relationship after birth, and stress-management. Those who were distressed were more likely to also endorse topics on strategies to improve emotional wellbeing and emotional adjustment, and how to access psychosocial resources (Da Costa et al, 2017). It seems there is a substantial gap in tailored provision for fathers which addresses their mental health needs as well as their needs around becoming a father.

Some authors have suggested potential models of care for fathers which might support their mental wellbeing across the transition to parenthood by offering options for stepped care, incorporating different levels of input dependent on fathers' needs. For example, following an integrative review of the literature around PPND, Habib (Habib, 2012) suggests a model of intervention whereby fathers are initially directed to web-based information about the transition to parenthood, including information about symptoms of depression and where to access more support if needed. Following this, Habib suggests an option to attend a male-only educational seminar where men can meet other expectant fathers and learn about the transition to parenthood in a group format. If fathers have additional mental health needs, then they can go on to access group treatment or individual or couple treatments, depending on their needs. This model has not undergone empirical testing, but incorporates ideas based on quantitative and qualitative data which have the potential to prevent and treat PPND.

In terms of specific approaches of interventions, cognitive behavioural therapy (CBT) is a well-established treatment for depression in the general population (Beck, 2011) and there are a number of reasons why it may be a useful approach for fathers. Research indicates that men with symptoms of depression currently use and are open to using a range of cognitive, problem-solving and goal-based strategies to prevent and manage mental health, suggesting that a cognitive behavioural framework is acceptable and may be an appropriate approach for fathers

(Proudfoot et al., 2015). Other authors have also advocated the use of CBT for male depression due to the focus on practical, problem-solving strategies and goal setting (Spendelow, 2015a).

However, in the UK, individual interventions for depression such as CBT are delivered mainly in mental health service settings, are rarely accessed by men, and are not specific to the needs of expectant fathers (Baker, 2020). Instead, fathers report that they have specific needs across the perinatal period, including dealing with changes in the partner relationship, coping with new demands and responsibilities, understanding infant development, and knowing where to go for different resources and sources of support (Letourneau et al, 2012; Baldwin et al, 2019). Similarly, Madsen (Madsen, 2009) suggests key features of therapy that may need to be incorporated when working with fathers with depression, in particular working with anger and withdrawal, focusing on current and past relationships, and the tensions between masculine stereotypes and the child's needs for care and nurturance. Standard CBT interventions for depression may not be able to meet these needs.

Indeed, the unique nature of the perinatal period has led to the development of adapted CBT interventions to address the needs of women with perinatal depression (Danaher et al., 2013; O'Mahen et al., 2013; Trevillion et al., 2020). Adaptations have included using an online format for flexible engagement; introducing behavioural activation before presentation of cognitive strategies (due to challenges with attention that accompany having a baby); reducing homework tasks; building support networks; incorporating partner sessions; and framing content specifically around perinatal topics. These adaptions have been found to be acceptable to women and feasible to deliver.

Despite the fact that there are currently no adapted, perinatal-specific CBT interventions targeted at fathers (Goldstein, Rosen, Howlett, Anderson, & Herman, 2020; Pilkington, Whelan, & Milne, 2015; Rominov et al., 2016), there are nevertheless existing service structures and models in England that could potentially provide the setting for such an intervention.

In England, the Improving Access to Psychological Therapies (IAPT) programme is designed to provide CBT-based interventions for mild-moderate symptoms of anxiety and depression (Clark, 2011). The programme is part of a stepped care model, which means that a range of interventions of different intensity are available depending on the mental health needs of the client. Step 1 is focussed on prevention and promotion, and may include information or self-

help provided by the GP or other primary care workers. IAPT services usually offer step 2 and step 3 interventions. Step 2 includes guided self-help, groups and workshops. Wherever possible, people presenting with mild symptoms of depression and anxiety will be offered these in the first instance as they are low intensity interventions which are widely available and are not resource intensive. Step 3 includes one-to-one sessions with a therapist and are offered for more persistent or moderate symptoms. Step 4 interventions are available in secondary care mental health services for those with more severe or specialised needs.

IAPT services are available in all areas of England and mean that there is a workforce of practitioners who are trained to deliver CBT-based interventions for mild-moderate depression. As well as options for face-to-face and telephone delivery of Step 2 interventions, services have recently begun providing options for online delivery, as recommended by the National Institute for Health and Care Excellence (National Institute for Health and Care Excellence, 2009). Their platforms provide web-based guided self-help interventions for depression and anxiety disorders, allowing clients to work through content at their own time and pace with regular check ins from a therapist to monitor progress and support completion. These services therefore offer flexible options for mild to moderate symptoms of depression at Step 2, with a safety net of Step 3 interventions available to those with more severe symptoms.

Furthermore, within IAPT services, there has been a push to upskill practitioners to tailor treatments for women who are pregnant or in the first postpartum year, and these women are currently prioritised for treatment (Department of Health, 2013). To support this development, in 2014 I developed and piloted a guided self-help intervention for antenatal depression to support the delivery of tailored, evidence-based step 2 interventions within IAPT. This was tested in a clinical trial (Trevillion et al., 2020) and is now being used throughout England. As such, there is a precedent for IAPT practitioners to learn to tailor their interventions to perinatal populations.

As mental health assessment for partners begins to be rolled out across perinatal mental health services in England, a likely route for referrals for those with identified symptoms of depression is to a local IAPT service. In order to reduce the impact of PPND on the whole family, Step 2 interventions need to be developed which are specifically targeted at the needs and concerns of fathers and which take into account the unique context of the perinatal period. This requires an understanding of the contextual, behavioural, and cognitive factors which impact on mood and

behaviour, as well as the components and format of an intervention which could modify and improve these factors.

This aim of this thesis is to review current evidence on interventions in the field of paternal perinatal mental health, alongside collecting novel data on the needs of men with multiple risk factors and the views of professionals in the field, in order to develop an intervention outline for mild to moderate symptoms of paternal perinatal depression. To support future implementation, this intervention will be based around a CBT model so that it can potentially be incorporated into IAPT service provision. This includes elucidating the adaptions needed to standard CBT interventions in terms of format, content and delivery and describing how these adaptions can bring about change in fathers' symptoms of depression.

1.9 Outline of the thesis

In this introductory chapter I have reviewed the literature related to PPND, exploring the prevalence, risk factors and impacts, as well as issues related to identification and intervention. This chapter provides a rationale for the need to develop interventions for PPND which target the specific needs of new and expectant fathers and are accessible and acceptable to this population.

Cathain et al (2019) set out a framework for actions for intervention development based on a consensus exercise informed by literature reviews and qualitative interviews. Their framework further expands on the UK Medical Research Council guidance on developing and evaluating complex interventions (2008), extending and elaborating on the stages and approaches of development in order to support researchers to focus their efforts.

Key actions include: planning the process; engaging stakeholders; reviewing published evidence; drawing on existing theories and articulating programme theory; undertaking primary data collection; considering future implementation; designing and refining the intervention. They emphasise that this is an iterative process rather than a series of steps, and that learning gained from different actions will inform other activities.

The remaining chapters of this thesis describe how these actions have been accomplished in the development of an intervention for paternal perinatal depression.

Chapters 2 and 3 present the methods and results of Study 1, a systematic review which summarises the evidence from effectiveness studies of interventions for fathers in the perinatal period. The inclusion criteria for this review are wide, encompassing studies whose target is paternal mental health, the couple relationship, and parenting variables, and covering both universal and clinical samples. The intention is to explore the key components of interventions which impact on outcomes relevant to fathers' mental health. Alongside the literature in Chapter 1, this work represents the stage of reviewing published evidence. It also touches on articulating programme theory, as potentially useful components of existing interventions are identified.

Chapter 4 summarises recent qualitative literature on fathers' mental health, drawing out specific learning for the purposes of intervention development. It also draws on learning from qualitative literature on men's mental health more widely. This chapter, along with Chapter 5 goes on to present the methods and results of Study 2 - a qualitative interview study of men with a range of stressors in the perinatal period. While there are a number of qualitative studies of men in the perinatal period, I had the opportunity to collect data from a sample of men who are underrepresented in the current literature – men who perpetrate violence against their partners in the perinatal period. This provides a unique insight into the complex difficulties that families face and adds to the current literature on this topic. This study represents primary data collection, as well as continuing to review published evidence, with a specific focus on qualitative evidence.

Chapter 6 presents the methods and results of Study 3 - an international Delphi study. The Delphi technique involves rounds of survey questions in which experts are invited to provide their opinions on a particular topic and to generate a consensus. This study aimed to gain the views of clinicians and academics working in the field of fathers' mental health, on what the components and targets of an intervention for PPND should be, specifically identifying factors that contribute to a cognitive behavioural understanding of paternal depression. This study also represents primary data collection.

Chapter 7 draws together the findings from the previous three studies, along with wider data in the field of paternal mental health, to present the outline of a CBT-based intervention for PPND. In this chapter, I describe the ways that a variety of stakeholders have been involved throughout the work, and then focus specifically on describing the different parts of the

intervention and some of the hypothesised mechanisms for change. I also touch on the next steps in terms of further development and evaluation.

Finally, Chapter 8 summarises the key findings, situates these findings in the wider context, and explores implications for research and practice including a specific focus on future implementation. It also describes the strengths and limitations of this work.

Throughout the thesis, I draw on a range of theoretical approaches to guide data collection and analysis. The next section summarises these approaches and the ways that they impact on the research.

1.10 Theoretical approach

Here I discuss the approach taken to data collection and analysis, which is based not only on the research question, but also on my own theoretical assumptions. I then briefly describe the therapeutic approaches underlying an intervention for PPND and the rationale for using these approaches. To begin, it is useful to note something about my position as a researcher.

I am a white British female clinical psychologist specialising in perinatal and infant mental health and working mainly in a research setting. My interest in perinatal mental health and, more specifically, fathers' mental health began when I got a job as a research assistant working on the 'Oxford Fathers Project' with Paul Ramchandani in 2009. The project was a longitudinal cohort study exploring the impact of paternal depression on child outcomes. This sparked my interest in perinatal mental health, not only from a research perspective, but also in terms of the possibilities for intervention. I went on to train in clinical psychology, undertaking a specialist perinatal placement in my final year and using data from the Oxford Fathers Project to complete my doctoral thesis. Since then I have held clinical posts in two perinatal mental health teams in London, and have been involved in several research projects within the Section of Women's Mental Health at King's College London.

In my clinical work, I have often been struck by the ways in which the couple relationship impacts on women's presenting difficulties and how often women disclose that they think their partner is struggling too. Perinatal mental health services in England currently only offer treatments to mothers. Many services offer interventions that include the baby, and some are now offering couple interventions. However, the index patient is the mother and so individual treatments are not offered to fathers or to other partners of the mother. Nevertheless, as research

evidence corroborates, women's mental health is impacted by the mental health of her partner, and this was clear for many of the women that I worked with. These experiences in a clinical setting further encouraged my interest in considering fathers mental health and the ways that this could be addressed in services.

In line with this, my research has included developing and evaluating interventions for families in the perinatal period which take account of the couple relationship, exploring the impacts of parental mental health on infants, and investigating the ways that the structure of health services and settings effect mental health outcomes. This has included several studies focused specifically on fathers' mental health, and therefore I approached this thesis with some existing knowledge of the literature about men's mental health, stigma, and masculinity, as well as issues around the recognition of paternal mental health difficulties, language and labelling of problems, and individual and institutional barriers to help-seeking and engaging with support. During the time that I have been undertaking this PhD, I was also commissioned by NHS England to develop good practice guidance around involving and supporting partners of women who are accessing specialist perinatal mental health services. This work further enhanced my knowledge and understanding and has further motivated me to contribute to developing good quality care pathways for fathers and partners to have their mental health needs met.

These experiences across both research and clinical settings, along with opportunities to train in different approaches and using different interventions, has given me a broad understanding of family mental health in the transition to parenthood. I believe that a 'think family' approach, which considers the perspectives and needs of all family members, is essential to create lasting change and improve outcomes for the next generation. Therefore, I undertook this thesis not only as a way to deepen my training in a variety of research methods, but also to contribute to the research evidence base for ways to best support fathers', and therefore families', mental health.

1.10.1 A mixed methods approach

The approach taken to data collection and analysis includes ontological assumptions about what can be known and the nature of reality, and epistemological assumptions about how we come to know the world and the role of the investigator. Quantitative and qualitative studies have key ontological and epistemological differences. Quantitative methods commonly take a

positivist stance, underpinned by the belief that reality exists independently of our awareness and can be observed and measured, providing objective knowledge about a sample that can be generalised to the population. Qualitative methods, in contrast, tend to take a post-positivist phenomenological approach, underpinned by the belief that we can only come to know reality through our senses and therefore this reality is constructed by our perceptions and the meanings we give to them. This approach gives the subjective experience of the participant primacy.

Traditionally, these approaches have been considered as rather polarised, being used for different research questions. However, increasingly, studies are moving beyond this dichotomy and taking a mixed-methods approach to consider the best way to answer the research questions and provide both depth and breadth to the topic under study. This recognises that there is value in both of these positions and that different methods can measure different aspects of the same phenomenon, providing a richer understanding of the study topic, and valuing both objective and subjective forms of knowledge (Bryman, 2006).

All the studies in this thesis are attempting to address questions about the targets and components of an intervention for PPND. They do this is different ways. The quantitative review summarises data from a large number of studies, drawing out components of interventions that are associated with improvements in specific variables. This was intended to give a broad overview of aspects of intervention e.g. the timing (antenatal or postnatal), format (e.g. group or individual) and focus (e.g. improving the couple relationship, understanding infant development) which may be important in improving fathers' mental health. The qualitative interview study delves into men's personal experiences of the transition to parenthood to understand what might be challenging and lead to distress, as well as what fathers find helpful in overcoming these challenges. This was intended to provide more details about the mechanisms which may help to understand outcomes. The Delphi study uses both quantitative and qualitative data to identify specific cognitive and behavioural components of paternal depression which are considered by experts to be key to make changes.

This approach draws on several concepts related to combining quantitative and qualitative research. (1) 'Triangulation' looks for convergence across different methods, exploring the ways that different sources of data corroborate each other. For example, there may be overlap between the components of interventions used in the studies in the review, and the suggestions for components made by experts in the Delphi study. (2) 'Complementarity' in mixed-methods research refers to using quantitative and qualitative methods to measure overlapping but

different aspects of the topic, thereby providing a richer picture and better understanding of the phenomenon. For example, the qualitative data may provide explanations for why certain components of interventions have an impact. (3) 'Expansion' i.e. extending the breadth and range of enquiry by using different methods for different components. For example, the qualitative study provides detailed data on a small sample of fathers, while the Delphi study draws on the knowledge of experts who have worked with many fathers (Greene, Caracelli, & Graham, 1989).

By approaching the research topic from different angles, my aim is to develop a theory of change and intervention outline which take account of many levels of data and which are underpinned by a rich evidence base.

1.10.2 Critical realism

Mixed methods approaches and the aim to find a middle ground between the hard science of positivism and the emphasis on language and perception of social constructivism, is in line with a critical realist approach. Critical realism accepts that there are objective realities that exist and operate independently of our awareness, which can be studied and measured. However, it also acknowledges that these measurements and observations are fallible, as social context and social conditioning impact on our understanding and our descriptions of the world (Archer, 2016). Therefore, we can attempt to improve our understanding of reality, but we cannot know reality with certainty.

In this way, mixed methods help us to get closer to the 'truth' by combining data from different sources, as described above. A critical realist approach would also include drawing on existing theories about the phenomena under study, in this case, the modifiable factors that are implicated in paternal perinatal depression, to produce the most plausible explanations of reality (Vincent & O'Mahoney, 2018). I used this approach in the process of analysis - rather than being inductively driven, I drew on existing theories about the nature of paternal depression to contribute to understanding the data. This was informed by the critical realist approach of finding 'the best explanation of reality through engagement with existing (fallible) theories about that reality' (Flettcher, 2017).

More importantly for a critical realist approach is that researchers can get closer to the truth by attempting to explain social phenomena through reference to underlying causal mechanisms i.e. not just *what* but *why*, while ensuring that we recognise the influence of historical, cultural,

and social factors in our accounts (Archer, 2016). This makes critical realism a useful approach for research into interventions as it is focused on understanding, rather than just describing, social reality i.e. elucidating the causal processes which impact on outcomes and articulating the theory behind a programme (Vincent & O'Mahoney, 2018). This includes mechanisms that are unobservable, such as people's motivations, beliefs and attitudes. In developing a psychosocial intervention, it is necessary to consider the causal mechanisms by which we expect components of the intervention to lead to changes, for example, considering the ways that the target population might respond and how we can increase the likelihood of behaviour change.

Additionally, when developing an intervention, researchers have to take into account contextual factors such as gender, age, and social context that may impact on the way mechanisms function to produce different outcomes. For example, in this thesis, gender is a particularly important context which is hypothesised to affect the way that users of the intervention might respond and behave.

Therefore, in the process of analysis, a critical realist approach involves combining observations from a range of sources and redescribing these data in terms of theory which outlines sequences of causation and the relations between different elements. This is the main aim of Chapter 7, which draws together the data from studies 1, 2 and 3, combining it with existing theory, and describing an intervention outline for PPND.

1.10.3 Feminism

This study also took a feminist approach. The term 'feminist research' refers to approaches which share a commitment to promote women's rights and safety and to produce knowledge which improves women's outcomes (McHugh, 2014). As noted above, the origins of this thesis come from my work as a clinical psychologist in a perinatal mental health team and as a researcher the Section of Women's Mental Health. While the focus is on men's mental health and understanding men's experiences of the transition to parenthood, the overall aim is to improve outcomes for the whole family by reducing distress and conflict and enhancing parental relationships and wellbeing. Indeed, McHugh (2014) emphasises that feminist research is not research *about* women, but research *for* women.

This also incorporates an understanding of models of men's mental health which emphasise problematic internalized masculine norms (Berke et al., 2018; Seidler, Rice, River, Oliffe, &

Dhillon, 2018). Socialised conceptions of what it means to be a man alongside perceived pressure to adhere to these stereotypes can lead to a narrow range of behaviours and lack of emotional expression. These constraints not only disrupt the ability to respond flexibly and adaptively to environmental demands, but also lead to gender-role stress, and can impact negatively on partner and family relationships.

1.10.4 Psychological theory

The main theoretical approach underpinning the development of the intervention is cognitive behavioural theory. A cognitive behavioural approach has both theoretical and practical value in relation to an intervention for PPND. Cognitive behavioural therapy (CBT) has been demonstrated to be an efficacious treatment for depression both when delivered face to face and as guided self-help (Coull & Morris, 2011), including when delivered in online formats (Andrews et al., 2018). The National Institute for Health and Care Excellence (NICE) in the UK recommends CBT-based treatments for mild to moderate symptoms of anxiety and depression, including computer- and internet-based self-help (National Institute for Health and Care Excellence, 2009). Because of this, primary mental health care in England is based largely around CBT models of treatment, with a large workforce trained to deliver CBT-based interventions for depression and anxiety. Therefore, in thinking about future implementation, an approach which can be easily incorporated into current service models is warranted.

In addition, as noted earlier in this chapter, several authors have described the reasons why CBT fits well with men's mental health treatment, highlighting the goal-oriented, practical focus to therapy, which takes a strengths-based approach with a clear structure and shared control of decisions (Seidler, Rice, Oliffe, Fogarty, & Dhillon, 2018; Spendelow, 2015b). Therefore, this is a sensible approach to take when considering the needs of fathers.

CBT is based on the idea that people's thoughts and behaviours impact on how they feel. The model of depression holds that inaccurate beliefs and repetitive negative thinking are associated with altered behavioural responses, feelings, and physiological states. This model is used as a basis for therapy, which focuses primarily on challenging and changing unhelpful thinking patterns through the use of a range of cognitive and behavioural techniques.

CBT can be delivered flexibly depending on the needs of the person. However, it has a focus on intrapersonal experiences (thoughts, behaviours, feelings) and, in the brief formats delivered in Step 2 IAPT interventions, primarily focuses on the present and future. The perinatal period

is inherently relational and the shifting family dynamics are a key trigger for stress and uncertainty. Furthermore, evidence indicates that memories of the past, especially of being parented, frequently arise during the perinatal period (Tolman & Walsh, 2020). Therefore, it may be useful to draw from other models of therapy.

Interpersonal therapy (IPT), for example, focuses on interpersonal relationships and is established as an efficacious treatment for depression (de Mello, de Jesus Mari, Bacaltchuk, Verdeli, & Neugebauer, 2005). NICE guidelines state that IPT may be considered as an alternative to CBT for moderate to severe symptoms of depression (National Institute for Health and Care Excellence, 2009). The formulation of difficulties includes the impact of role transitions and role disputes, and treatment includes supporting people to assume their new role, decrease social isolation and improve their communication skills (Markowitz & Weissman, 2004). These are particularly relevant for the transition to parenthood, where new parents may be grieving the loss of their old lives and coming into conflict as they negotiate the changes in their relationship.

In England, fewer therapists are trained in IPT compared to CBT and it is not commonly delivered in Step 2 interventions as IAPT services have been developed to deliver low intensity CBT-based interventions for mild to moderate symptoms, and a workforce of therapists have been trained for this purpose. Nevertheless, elements of this therapy may be usefully integrated into a CBT-based intervention for perinatal depression in order to support the transition to parenthood. Indeed, this has successfully been done in guided self-help treatments for maternal depression (O'Mahen et al., 2013; Trevillion et al., 2020).

Parent-infant therapies often draw on attachment theory and psychodynamic concepts such as reflective functioning (the capacity to understand behaviour in terms of underlying mental states and intentions (Slade, 2005)) to support improved parent-infant interactions (Barlow et al., 2010). For example, interventions based on video interaction guidance use techniques such as ‘speaking for the baby’ and developmental guidance to support parents’ understanding of their infant’s thoughts and needs (Juffer, Bakermans-Kranenburg, & Van Ijzendoorn, 2018). These interventions have been shown to improve maternal sensitivity and infant attachment (Bakermans-Kranenburg, Van Ijzendoorn, & Juffer, 2003). Similar techniques have been incorporated into CBT-based interventions for maternal antenatal depression to support maternal-foetal bonding (Trevillion et al., 2020), and a recent pilot study with expectant fathers found that interaction guidance using ultrasound scans could support fathers’ growing

understanding of the baby before the birth (Alyousefi-van Dijk, de Waal, van Ijzendoorn, & Bakermans-Kranenburg, 2021). Within these interventions, parents are provided with opportunities to notice and discuss memories of their own experiences of being parented, which may impact on their thoughts about the baby. While relatively brief, behaviourally focused interventions are not designed to explore these issues in depth, they can nevertheless facilitate parents' awareness of the influences on their parenting, allowing conscious choices in the present while educating parents about babies' development and capacities.

The ways in which these models can be integrated with CBT approaches are described further in Chapter 7.

1.11 Conclusion

The high prevalence of PPND, along with the well-established data on the adverse impacts on all family members, highlights the need for interventions which can reduce symptoms of depression and improve family wellbeing. Despite the substantial institutional and individual barriers to identifying fathers' mental health needs, recent policy to assess the mental health needs of partners of women with perinatal mental health disorders provides a unique opportunity to detect difficulties and intervene to support fathers. Previous reviews have indicated there are no existing interventions aimed at fathers with symptoms of depression. This is a significant gap in provision as the perinatal period presents unique challenges for men which mean that standard interventions for depression may not be helpful. Indeed, the nature of the perinatal period has led to the development of adapted interventions for women, along with workforce training to support the delivery of this intervention in primary care mental health services in England.

This aim of this thesis is to develop an intervention outline for mild to moderate symptoms of paternal perinatal depression by reviewing current evidence alongside collecting novel data from fathers and professionals in the field. To support future implementation, this intervention will be based around a CBT model so that it can potentially be incorporated into IAPT service provision.

1.12 Aims and objectives

The overall aim of this thesis is to develop an intervention outline for a CBT-based intervention for mild to moderate symptoms of paternal perinatal depression.

To do this, the objectives are:

- To review current quantitative evidence on interventions in the field of paternal perinatal mental health in order to identify intervention components which are beneficial in improving (1) paternal perinatal distress, (2) the couple relationship (3) the father-infant relationship/parenting.
- To summarise existing qualitative evidence on paternal mental health and collect novel interview data from a sample of men with multiple risk factors for poor mental health, in order to identify potential targets for intervention and mechanisms of change.
- To gather the views of experts in the field of paternal mental health on the components and targets of an intervention to treat paternal perinatal depression, specifically: (1) typical areas of distress, (2) key beliefs and behaviours that are present in paternal depression and, (3) potential mechanisms of change for overcoming symptoms.
- To draw data from these studies together, alongside existing data and theory related to CBT-based and perinatal interventions, in order to elucidate the adaptions needed to standard CBT interventions in terms of format, content and delivery and describe how these adaptions can bring about change in fathers' symptoms of depression.

CHAPTER 2 - PSYCHOSOCIAL INTERVENTIONS FOR FATHERS IN THE PERINATAL PERIOD: A NARRATIVE SYNTHESIS. INTRODUCTION AND METHODS

The protocol for this review was registered with the prospective register of systematic reviews (PROSPERO: registration number CRD42017078417). The protocol can be accessed here:
https://www.crd.york.ac.uk/prospero/display_record.php?RecordID=78417
Amendments that have been made to it can be seen in Appendix 1.

2.1 Introduction

This systematic review examines the format, components and impacts of a range of interventions for fathers in the perinatal period focused on parenting, interpersonal relationships and mental health, in order to summarise key learnings for both prevention and reduction of distress.

A previous review by Rominov et al (Rominov et al., 2016), whose database searches went up until 2015, aimed to assess the effectiveness of interventions in preventing and treating paternal perinatal mental illness. They included studies which analysed depression, anxiety and stress as outcome variables and found that there were no interventions specifically targeting fathers with mental health difficulties. Furthermore, they found limited intervention effects and substantial variability in outcome measures, making it difficult to evaluate effectiveness. The current study not only updates that review with searches up until February 2018, but also expands the criteria to include studies of perinatal interventions which aimed to impact on the couple relationship and paternal parenting outcomes. These additional outcomes were included due to their importance both as risk factors for PPND and as mechanisms for the transmission of risk from fathers' depression to their children.

A poor quality couple relationship has been identified as a key risk factor for paternal depression (Giallo et al., 2013) and, conversely, depression in fathers is associated with

an increased risk of disharmony in partner relationships (Ramchandani et al., 2011). In this way, couple relationship quality has bi-directional associations with mental health and, therefore, relationship quality is an important target both for prevention and intervention of PPND.

A similar pattern may exist in relation to father-infant relationships. Fathers report that feeling uninvolved in the transition to parenthood, not having information on how to care for the baby and struggling to bond are important triggers for stress and worry (Baldwin et al., 2018). On the other hand, fathers with depression tend to be more withdrawn in their interactions with infants (Field, 2010; Sethna et al., 2015) and more likely to spend time away from the home, with increasing time spent at work or on other activities (Darwin et al., 2017). These poor quality early relationships have been associated with an increased risk of later behavioural problems in children (Ramchandani et al., 2013). Therefore, increasing understanding about infant development and sense of competence as a father, as well as providing support with building a relationship with the baby may be important factors in preventing and treating paternal depression, as well as protecting infant outcomes.

Couple relationship and father-infant relationship are, therefore, important targets for any interventions which aim to improve outcomes for the whole family.

In order to design appropriate interventions for fathers which take account of their particular needs during the perinatal period, it is necessary to draw together recent evidence in a way that can highlight the key factors and mechanisms which are both important in the pathway to poor outcomes and also potentially modifiable. The current review expands on the work of Rominov and colleagues by examining the strength of evidence for different components and formats of interventions for fathers in the perinatal period, to inform the development of an intervention tailored for fathers with mental health difficulties.

2.2 Objectives

The objective of this systematic review is to summarise existing evidence from psychosocial interventions on the:

- Content and format of interventions which target (1) paternal perinatal distress, (2) the couple relationship or (3) the father-infant relationship/parenting.
- Components of interventions which are effective in improving (1) paternal perinatal distress, (2) the couple relationship or (3) the father-infant relationship/parenting.

2.3 Methods

2.3.1 Eligibility criteria

2.3.1.1 Study type

Inclusion criteria: Primary intervention studies based on experimental designs, including randomised and non-randomised controlled trials, cluster-randomised trials and parallel group studies, and also quasi-experimental studies including pre-post designs. Studies had to be published in peer-reviewed journals.

Exclusion criteria: Non-peer reviewed and grey literature were excluded. Book chapters, conference papers, editorials, letters and general comment papers, as well as theses/dissertations were excluded from the review. This was to ensure the papers included in the review were of a high-quality and had undergone formal peer-review, as a way to reduce bias. Studies defined as a case study or case series were excluded, as were protocols and pilot studies. Pilot studies were defined as those measuring the acceptability and/or feasibility of an intervention, rather than examining its effectiveness or collecting data on outcome measures.

2.3.1.2 Study characteristics

Intervention type:

- Psychosocial interventions, defined as 'interpersonal or informational activities, techniques, or strategies that target biological, behavioural, cognitive, emotional, interpersonal, social, or environmental factors with the aim of improving health functioning and well-being' (Committee on Developing Evidence-Based Standards for Psychosocial Interventions for Mental Disorders, England, Butler, & Gonzalez, 2015).

- Either group or individual formats, delivered to either the couple or the father.
- Delivered either face-to-face or remotely (e.g. internet, telephone).

Setting:

- Clinical (e.g. hospital, outpatient healthcare service) and non-clinical (community setting, in the home) settings.
- Undertaken in high income countries (HIC). This was in order to identify the most promising components of an intervention which could be delivered to fathers in the UK.

Timing:

- Intervention delivered in the antenatal, perinatal or postnatal period.
- Time of assessment may include immediately at the end of the intervention and up to 12 months post intervention.

Date and language:

- All studies published up to February 2018. A lower limit of 1990 was assigned as scoping searches indicated that there were few relevant papers before this date and the intention was to find studies which would be relevant to modern day fathers and services.
- Only English language papers were retrieved as the study did not have the resources to translate papers in other languages.

2.3.1.3 Study population

Inclusion criteria: Studies were eligible for inclusion if their study population included men whose partners were pregnant or in the first postnatal year (the 'perinatal period' for the purposes of this review). This could include both biological and non-biological fathers (e.g. step-fathers). There were no restrictions on whether the man was living with his partner at the time of the study.

Both clinical and non-clinical populations i.e. those with identified mental health needs and those without such needs, were included.

Exclusion criteria: Studies were excluded if the sample did not include fathers. Where the study focused on populations with a specific characteristic related to the infant (such as prematurity, time in NICU, or stillbirth) or the father (such as intellectual disability or being a stepfather) this was not included. This was because these populations have specific needs which impact either on the delivery or content of interventions, or on their response to the intervention. Therefore, this may not be generalisable to other populations.

2.3.1.4 Study outcomes

Inclusion criteria: Studies were eligible for inclusion if they reported on the effectiveness of interventions which target:

(1) aspects of paternal wellbeing (e.g. mental health, stress)

(2) the couple relationship (e.g. marital satisfaction, relationship quality)

(3) the father-infant relationship or parenting (e.g. bonding, parenting self-efficacy, father-infant interaction, father involvement).

Exclusion criteria: Where outcomes were related to mothers only, these were not included. Studies that included data on both mothers and fathers were included if the outcomes were reported separately. Only those outcomes related to fathers were included in the synthesis.

2.3.2 Search Strategy

The search strategy followed PRISMA guidelines (Moher, Liberati, Tetzlaff, Altman, & Group, 2009) (see Appendix 2 for the completed checklist).

2.3.2.1 Search terms and data sources

Database searches were undertaken to identify primary papers. The following electronic databases were searched from 1990 to February 2018:

Cochrane Central

PsycINFO

MEDLINE

Maternity and infant care (MIDIRS)

British Nursing Index (BNID)

CINAHL

The search strategy included terms to capture study design, timing of intervention and population. Study design terms were adapted from the Cochrane handbook (McKenzie & Brennan, 2019) in order to capture a range of intervention designs. Terms related to fathers and the perinatal period were adapted from other reviews on this topic, including replicating the terms used by Rominov et al, as well as adding additional terms to capture studies with a wider range of outcomes (Magill-Evans, Harrison, Rempel, & Slater, 2006; Suto, Takehara, Yamane, & Ota, 2017). An example of the terms used for one of the databases can be seen in Box 1. A full list of search terms used in each database can be seen in Appendix 3.

Box 1 – search terms for OVID databases

randomi#ed controlled trial*.pt. or randomi#ed.ab. or randomly.ab. or trial.ab. or non-randomi#ed.ab. or nonrandomi#ed.ab. or (control adj group*).ab. or (treatment adj group*).ab. or (pilot adj stud*).ab. or evaluation*.ab. or quasi-experiment*.ab. or quasiexperiment*.ab.

AND

(father* or paternal* or dad or men or partner)

AND

(perinatal or pregnan* or prenatal or pre-natal or antenatal or ante-natal or postnatal or post-natal or postpartum or post-partum or baby or babies or infan* or childbirth)

AND

Limit to Human, English language, peer-reviewed

AND

Limit to 1990-current

Reference lists of included studies were searched and citation tracking (using Google Scholar) was used to identify additional potentially relevant studies. Reference lists of published reviews in the field of fathers' mental health which had been picked up in database searches were also searched.

2.3.2.2 Title and abstract screening

Citations from the database searches were downloaded to EndNote© software, where duplicate citations were removed. Based on the criteria described above, the titles and abstracts of all downloaded citations were evaluated for a decision on initial inclusion or exclusion. A second reviewer checked 20% of titles. If there was uncertainty or disagreement between reviewers about a citation, the full text paper was retrieved, and a decision was made through discussion.

2.3.2.3 Retrieval and review of full text articles

Full text copies of the papers identified as potentially eligible for inclusion were obtained. One reviewer (JD) read the retrieved papers and used a standardised checklist based on the eligibility criteria to make a decision about inclusion. The reviewer made a note of the reasons for the exclusion of identified studies so that this could be summarised. See Appendix 4 for a list of excluded and included studies, with reasons for exclusion.

Where papers referred to other publications of the same data/population which had not been found in the searches (e.g. qualitative data on acceptability of the intervention), these were also downloaded in order to maximise the information available on the different interventions and their impacts. However, only the main quantitative paper with outcomes meeting the criteria for this review was included in the synthesis.

2.3.3 Data extraction

Data was extracted using a standardised extraction form. The data extraction form was adapted from the CONSORT reporting guidelines for clinical trials (K. F. Schulz, Altman, Moher, & Group, 2010) and included information on (1) study design, (2) characteristics of the sample (e.g. demographics, whether targeted or universal), (3) details of the intervention (e.g. format, duration, setting), (4) outcome measures (e.g. instrument, time

points), and (5) results of the study. It was piloted on 3 studies at which time additional items were added i.e. whether the intervention was delivered to the father only or to the couple, which of the three outcomes were measured (mental health, couple relationship, parenting). The headings used in the extraction form can be seen in Appendix 5.

2.3.4 Quality appraisal

To assess the quality of the included papers and their risk of bias, I developed a quality appraisal checklist which included criteria adapted from the Critical Appraisal Skills Program (CASP) checklist for randomised controlled trials (Critical Appraisal Skills Programme, 2018) and from the Quality Index Checklist for randomised and non-randomised studies of health care interventions (Downs & Black, 1998).

The CASP is a tool that has been designed to help researchers systematically assess the trustworthiness, relevance and results of published randomised controlled trials. It covers three broad issues across 11 questions, with a yes/no or 'can't tell' answer. Section A aims to answer the question 'Are the results of the study valid?'. This includes 6 questions which cover key methodological issues in RCTs such as randomisation and blinding. All 6 of these questions were included in the quality appraisal for the current study. Section B aims to answer the question 'What are the results?'. This includes 2 questions related to the size and precision of treatment effects. Following piloting on five papers, these questions were removed for the current study as most studies did not report these details. Section C answers the question 'Will the results help locally?'. This includes 3 questions about the relevance and importance of the findings. These questions were also excluded from quality appraisal as the papers had already gone through a screening process which judged them to be relevant to answer the review question.

Several key issues relevant to the current study were not covered by the CASP checklist. This included the clarity of the descriptions of the intervention, participants and outcomes. These were considered important given that the aim of the review is to identify key components which impact on specific outcomes for a particular population. Additionally, items related to the way results are reported and the power of the study to detect effects were considered as important to include. Therefore, additional items from the Quality Index Checklist by Downs and Black (1998) were also selected. This checklist was designed to cover both randomised and non-randomised designs of health care

interventions and includes 27 items covering a wide range of issues related to methodological quality. Many of these items overlapped with the CASP items already included. Therefore, a further 5 items were selected to cover the outstanding issues. Three items related to the clarity of the description of aspects of the study (items 2, 3 and 4 from the original checklist); one item related to the power of the study to detect effects (item 27 from the original checklist); and one item related to treatment effects being appropriately described (item 6 from the original checklist).

The quality appraisal form used can be seen in Appendix 6. These assessment criteria were used to provide a quality rating of included studies which assessed not only the risk of bias but also the quality of the reporting. For each item, studies were given a score of 1 where they met criteria, 0 if they did not, or 0.5 if they partially met criteria (e.g. randomisation took place but to a low standard). The maximum score was 11. However, it was recognised that this was not a validated scale and that a numerical value could give a false impression of meaningfulness. Rather, the scale was intended as a guide to aid the process of comparing a large number of studies and making decisions about the strength of evidence for particular interventions. Therefore, cut-off scores were assigned so that papers could be categorised as poor, moderate or good quality. This had the advantage of maintaining a level of detail to the quality assessments, allowing a justification for group allocation, while not relying heavily on individual scores.

Following piloting on 10 (approximately 28%) papers, a cut-off of 6 was chosen to identify poor quality papers as this would capture papers that had substantial weaknesses either in their reporting or in their design. For example, if studies had reasonable descriptions of the methods (and therefore could gain 4 points) but were poorly conducted (e.g. no randomisation, not enough power to detect effects etc) they would be rated as poor. Similarly, those that described reasonable methods but were not clear about, for example, what the intervention was, participant characteristics etc. would be classified as poor quality. A cut-off of 9 was used to identify good quality papers. These papers had minimal weaknesses both across their level of description and also their methods.

Two methods were used to increase reliability of the quality assessments. First, a second rater (my supervisor - KT) assessed the quality of 10% of the studies. Where there were discrepancies in scores these were resolved through discussion. This helped to clarify the

way in which the items were applied to the individual studies. For example, when to assign a rating of 0.5 instead of 1 depending on the way that the process of randomisation was described/undertaken. Second, where studies had previously been included in published systematic reviews, the quality rating was compared with the quality appraisal information provided in the previous review. This, therefore, provided some measure of reliability.

2.3.5 Narrative synthesis

Narrative synthesis was chosen to summarise the studies in the review. There were a number of reasons for this, with a key issue being the variation across studies. There was considerable clinical and methodological diversity, with studies using different designs, interventions, populations and outcomes; there was heterogeneity across effect measures, with numerous different measures used for similar outcomes, including the same outcome being treated differently (e.g. using a binary rather than a continuous outcome); there was incomplete reporting of the outcome, with descriptions of intervention effects sometimes being limited to a *p* value or statement of significance; there was bias in the evidence, for example, a lack of detail about random allocation to groups and blinding procedures. This variation means that an average value for the intervention effect would be extremely difficult to determine and, more importantly, would not be meaningful (McKenzie & Brennan, 2019). Furthermore, the aim of the review was not to look at effectiveness per se. Previous reviews and scoping searches for this review had indicated that there were few interventions which targeted men with poor mental health and, therefore, the purpose was not to select the 'best' intervention. Instead, the aim was to look at the impacts of different interventions, taking into account their formats and components, on the outcomes of interest. Therefore, narrative synthesis was considered a useful method to summarise and explain the features of different interventions and the outcomes for families.

First, the characteristics of the included studies were described, providing an overview of the range of settings, populations, formats and timing of the interventions, and the outcome measures used. This provides a summary of the types of interventions that have been tested to date. This data is also presented in a summary table, which can be seen in Chapter 3 (Table 1).

For the next stage of the analysis, studies were excluded if they were rated as poor quality. This decision was taken as the poor-quality studies included those who provided few details about the intervention or the participants and did not take measures to reduce bias in their study designs. Therefore, it was not possible to identify the components of the intervention which impacted on outcomes and therefore this would affect the trustworthiness of the synthesis. Nine studies were rated as poor quality, leaving 25 for the main synthesis. More details about this are provided in the next chapter, which describes the results of the review.

Next, following guidance from the Cochrane Handbook for Systematic Reviews of Interventions (Higgins et al., 2019) and the Synthesis Without Meta-analysis (SWiM) reporting guideline (Campbell et al., 2020), studies are presented in more detail under the main heading of their primary outcome (e.g. mental health, couple relationship or parenting). This grouping was chosen in order to help identify which types of intervention may be beneficial for different outcomes. As described in the introduction, although mental health is the overall outcome of interest, the quality of the couple relationship and aspects of parenting are closely associated with mental health and are important variables in the chain of transmission of risk to infants. Therefore, identifying components of interventions which have the potential to impact on these variables is an important part of this review.

Many studies also measured secondary outcomes that fell within the review criteria. For example, several studies stated couple functioning was the primary outcome, but mental health measures were also included. Where this was the case, a further brief description of the study and its outcomes are provided under the appropriate heading.

Within these main groupings, the studies are further grouped by the timing of the intervention i.e. antenatal, perinatal or postnatal. This is useful to help elucidate the stage of the perinatal period at which interventions may be most usefully delivered.

In this preliminary synthesis, each study was summarised using the following details: author and country where the study was undertaken; population targeted, including sample size; intervention details, including format of delivery, number of sessions, key content, and comparator; outcome measures and time points; main results.

Finally, studies were scrutinised for patterns both within and between studies to identify factors that might help to explain outcomes (Popay et al., 2006). To explore associations between components of the interventions and their impacts on the three outcomes, studies were first categorised according to whether or not they had a beneficial impact on the outcome under consideration. This was done in a binary way i.e. either the study had a beneficial impact or it did not, rather than rating the level of significance or effect size. This vote counting method is recommended where studies vary greatly in the way they report outcomes and the level of detail they provide about results (McKenzie & Brennan, 2019) .

Next, two methods were used to summarise the data in terms of format and components which may impact on the three outcomes. Harvest plots were used to provide a visual representation of broad aspects of the studies which may have impacted on each of the three outcomes. Harvest plots can be used to synthesise data where reviews include a complex and diverse group of studies (Ogilvie et al., 2008). They are indicated where the vote counting method of synthesis has been used as they involve grouping together studies based on the categorisation of effects (i.e. beneficial, harmful or no effect). Each study is represented by a bar positioned according to its categorization. The bars can be weighted, shaded and/or annotated to highlight study and outcome characteristics (McKenzie & Brennan, 2019).

There are numerous study characteristics which may have affected outcomes and could be used in the plots. Decisions about which variables to include took both a theoretical and practical approach. From a practical point of view, there was wide variation in the level of detail provided about certain aspects of the studies. For example, many studies did not report on the qualifications or training of those delivering the intervention or the setting of the intervention. Therefore, these aspects could not be included in the synthesis. However, some aspects of interventions lent themselves more easily to this type of visual representation and, furthermore, were key features that could impact on outcomes.

Specifically, the plots highlighted variables related to the overall format of the interventions which may act as moderators. This included:

- Timing of the intervention - antenatal, perinatal or postnatal

- Length/intensity of input - categories, created for the purpose of this review, defined as low (a single session), medium (2-4 hours or sessions) or high (over 4 hours or sessions).
- Whether the intervention included a substantial father-only component - yes or no.
- The primary target of the study - improvements in mental health, couple relationship or parenting.

A plot was created for each of the three outcomes and these were scrutinised for patterns.

Secondly, specific components of the delivery format (e.g. group discussions, demonstrations) and content (e.g. skills in problem-solving, information about infant development) of included studies were identified and tabulated. This was done by reviewing the descriptions of the delivery formats and content described by the authors, and extracting the main features under a limited number of categories. This was done in an iterative way – a small sample of studies (n=5) was used to extract an initial list of formats and content topics. Data from other studies was then allocated to these categories unless there was a clearly different format or topic, in which case a new category was created. For example, some interventions included very specific components e.g. infant massage, which required their own category. When all studies had been completed, some of the early studies were reviewed again to ensure that they did not include any components from the more recent categories. The final categories included six distinct delivery formats and thirteen content topics, which provide an overview of the complexity of the interventions, both in terms of the range of modes of delivery used and also in the range of topics covered (these categories can be seen in Table 3 in the next chapter and also in Appendix 7). Finally, these components of the intervention were cross-referenced with the impact on the three different outcomes. For each outcome, the number of studies that used a specific intervention component and had an impact are compared with those that used the same component but did not have an impact. Due to the large number of comparisons and small numbers in some categories, these data were not subject to statistical analysis, but instead are presented descriptively and give an indication of trends which may be important in outcomes.

CHAPTER 3 – PSYCHOSOCIAL INTERVENTIONS FOR FATHERS IN THE PERINATAL PERIOD: A NARRATIVE SYNTHESIS. RESULTS AND DISCUSSION

3.1 Results

3.1.1 Number of studies screened and included

Figure 2 shows the PRISMA diagram which outlines the stages of the review (Moher et al., 2009). Database searches identified 3604 records (see Appendix 3 for a full breakdown of the number of articles identified in each database). After duplicates were removed, this left 2307 papers that underwent title and abstract screening. From these, 2254 were excluded, leaving 53 papers. A further 7 relevant references were found through citation tracking, and 3 further references were identified through searching in reviews of the field (e.g. Magill-Evans et al., 2006; Suto et al., 2017). 63 papers therefore underwent full-text screening, which represented 55 different studies.

Twelve of the 55 studies were excluded: 1 was not from a high-income country, 2 did not report paternal outcomes, 5 were not perinatal (i.e. included data from toddlers and pre-schoolers), 1 could not be obtained in English, 1 used type of hospital room as the intervention, 1 was a case study series, and 1 had breast-feeding self-efficacy as an outcome which did not fit into the inclusion criteria. This left a total of 43 different studies. Nine of the 43 studies were pilots or protocol papers (pilot papers were defined as those measuring the acceptability and/or feasibility of an intervention, rather than examining its effectiveness or collecting data on outcome measures of mental health etc). These were also excluded.

Therefore, 34 studies were included in the review. Full details of the studies retained and excluded, following full text screening, can be seen in Appendix 4.

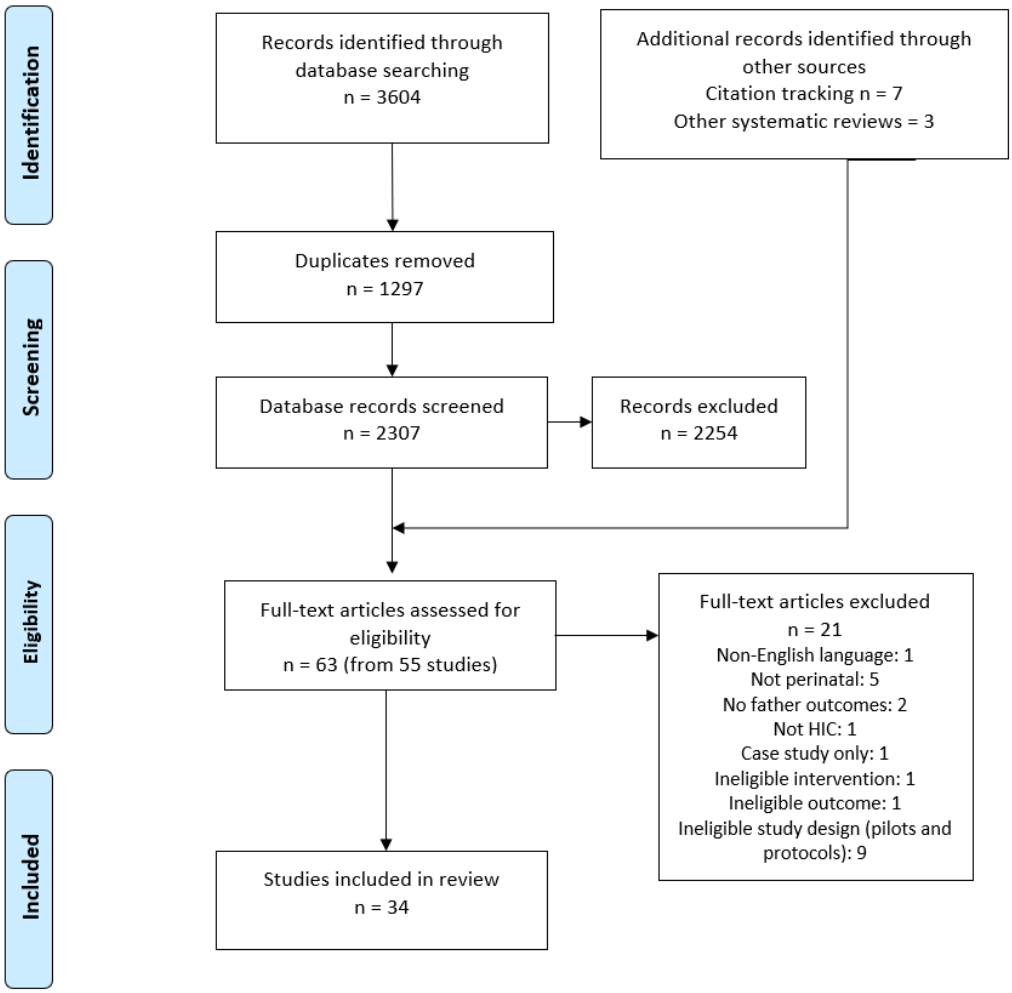


Figure 2 - PRISMA flow diagram of search process

3.1.2 Quality of included studies

The quality of papers was assessed using a combination of items from the CASP and from the Quality Index Checklist by Downs and Black (1998). There were 11 items in total, which could be scored 1, 0 or 0.5, making a maximum of 11. The range of scores was 2.5 – 11, with a mean of 7.3 and a median of 7. Based on their score, studies were defined either as poor (up to 6), moderate (>6-8) or good (>8) quality.

A second rater independently appraised 10% of the studies. Any discrepancies were resolved by discussion. Where studies had previously been included in already published systematic reviews, the quality rating assigned from this review was compared with the quality appraisal information provided in the previous review. Although most other reviews had not provided a numerical score for their appraisal or given a specific rating of quality (they generally provided summary information about quality in different areas) the appraisals of the published reviews

corresponded with that of the current review. For example, where a study in the current review had been rated as of good quality (>8), the same study in a previous review was described as having adequate randomisation and blinding procedures. This, therefore, provided some measure of reliability.

Nine studies were rated as low quality, 15 moderate and 10 good. Most studies had adequate reporting of the intervention and procedures. However, 24 of the papers either did not use random allocation into groups, did not provide sufficient detail to judge the quality of randomisation, or had a pre-post design. Furthermore, 18 studies had sample sizes which did not have sufficient power to detect effects, and many did not report sufficient details about blinding of researchers or characteristics of participants in each group to accurately evaluate methodological quality. Additionally, the reporting of results differed greatly between studies in terms of the level of detail provided and the clarity of who was included in the analysis. Several studies did not provide statistical summaries of results and instead just reported key outcomes in the text.

3.1.3 Characteristics of included studies

This section provides an overview of the characteristics of the included studies, including where they were undertaken, who they targeted, and which formats were used. Table 1 summarises the characteristics of the included studies, including methodological quality.

Table 1 - Characteristics of included studies

Author and location	Design and sample	Description of intervention	Measures (construct) and outcome time points	Key results	Quality rating*
Antenatal interventions					
Bergstrom, 2009 Sweden	RCT N=1064 universal primiparous couples (TG=529, CG=535) 97% married, 40% university educated	Antenatal group delivered to couples. 4x2 hr antenatal classes for couples, inc breathing/relaxation to prepare for birth.	SPSQ (Parenting stress) W-DEQ A and B (childbirth experience) 3 mths PN	There were no statistically significant differences in the experience of childbirth or parental stress between the randomised groups. BUT Lower parenting stress and better childbirth experience in FOC subgroup.	Good
Bryan, 2000 US	Quasi-experimental N = 77 universal primiparous couples (TG=35, CG=42) 96% Caucasian, mixed education, mixed marriage status	Antenatal group delivered to couples. 3x additional sessions on parenting roles, infant abilities and development (Growing as a Couple and Family)	NCATS (F-I interaction) 6-24 months PN	TG fathers scored higher in social-emotional growth fostering scale. No differences on the three other subscales. On overall score, 11 CG men (26.2%) and 3 TG men (8.6%) fell below cutoff scores (p = 0.04).	Moderate
Coffman et al, 1994 US	RCT N=141 universal mixed parity couples (TG=97, CG=107 [individuals]) White (97%), educated, married.	Antenatal group delivered to couples. 1x additional antenatal class on partner support following childbirth	ABS (mood/affect) Attitude toward baby R'ship satisfaction (not specified) 3-6 months PN	Intervention was not related to a change in parent outcomes, inc relationship satisfaction, emotional affect, or attitude towards baby.	Moderate
Daley-McCoy, 2015 UK	Cluster RCT N=63 universal primiparous couples (TG=39, CG=24) Majority married. States those from minority backgrounds were under-represented.	Antenatal group delivered to couples. 1x extra 2hr session with psychologist about prep for parenthood and communication.	CSS/CCS (Couple satisfaction and communication) EPDS (depression) End of intervention and 6 wks PN	Men in the intervention reported significantly less deterioration in couple communication (p=0.029) and significant improvement in psychological distress compared to controls (p=0.023)	Good

Author and location	Design and sample	Description of intervention	Measures (construct) and outcome time points	Key results	Quality rating*
Diemer, 1997 US	RCT N=83 universal mixed parity couples (TG=43, CG=40) Predominantly Caucasian, middle-class, married.	Antenatal group delivered to couples. 8 classes extra to standard care, father-focused to prep for birth.	Brief symptom inventory (Stress) CTS (couple conflict) SBQ (couple support) Last session (AN)	No significant difference in stress scores. Improvement in one scale of SBQ (housework) and one scale of CTS (reasoning) for treatment group.	Moderate
Field et al, 2008 US	RCT N=57 universal mixed parity couples (TG=29, CG=28) Mixed education, low to Moderate SES, mixed ethnicity.	Antenatal sessions delivered to couples. Fathers taught to massage partners for 2x 20 min/wk over 16 weeks during pregnancy	STAI (anxiety) CES-D (depression) STAXI (anger) R'ship Questionnaire 32 wks AN	Decreased depression ($p<0.01$) and anxiety ($p<0.01$) and improved relationship with partner ($p<0.05$) in treatment group versus controls. No differences in anger scores.	Poor
Gambrel & Piercy, 2015 US	RCT N= 66 universal primiparous couples (TG=32, CG=34) 75% married, 75% degree or above, 90% Caucasian.	Antenatal group delivered to couples. 4x 2 hr group session for couples: Mindful Transition to parenthood. Psychoed and mindfulness.	CSI (relationship satisfaction) FFMO (Mindfulness) PANAS (mood/affect) DASS (dep & anx) End of intervention (AN)	Significant improvement for the treatment group in relationship satisfaction ($p \leq .05$), and mindfulness ($p < .05$) compared to waitlist control. Treatment group also had a significant decline in negative affect ($p < .05$) compared to control.	Moderate
Gjerdingen and Center, 2002 US	RCT N=129 universal primiparous couples (TG=69, CG=60) 93% white, 92% married, 65% higher education.	Antenatal group delivered to couples. 2x 30 min additional antenatal class on relationship and division of labour with psychotherapist	SF-36 (MH scale) (mood/affect) Quality of Life KMS (marital satisfaction) 6 months PN	No significant impact found on any of the outcomes.	Good

Author and location	Design and sample	Description of intervention	Measures (construct) and outcome time points	Key results	Quality rating*
Hauck et al, 2015 Australia	Non-randomised trial N=115 universal mostly primiparous fathers (TG=68, CG=47) Described as 'low risk'	Antenatal group delivered to fathers. 1x 1hr additional session for men to prep for postnatal period, delivered by male.	DASS Parental self-efficacy Parental satisfaction 6 wks PN	Treatment group were significantly less likely than controls to have a normal anxiety (71% vs 88%, p=0.008) or stress score (62% vs 88%, p=0.021). Satisfaction and competence scores were comparable across groups.	Moderate
Hawkins, 2006/2008 US	RCT N=155 universal primiparous couples (TG=51, Active CG=55, CG=49) 91% white, all married, majority well educated	Antenatal group delivered to couples. 5x 15 min extra time with video on 'Marriage Moments' and activity led by childbirth instructor.	Father involvement DAS-R TAS (Transition to parenthood) RELATE (marital satisfaction) End of intervention, 3 and 6 mths PN	No significant impact found on any of the outcomes.	Moderate
Hung et al, 1996 Taiwan	RCT N=100 universal primiparous couples (TG=50, CG=50) Majority completed high school, varied job status.	Antenatal group delivered to couples. 3 x 2hr class on physiology and psychology of pregnancy and birth	Zung's Self-rating dep & anx scale 36 wks, 39 wks, 1 day PN	No significant impact found on any of the outcomes.	Moderate
Latifses et al, 2005 US	RCT N=139 Universal mixed parity couples (TG=47, CG=46+46) Majority (57%) Caucasian (18% Latino), educated, married.	Antenatal session delivered to fathers. Fathers taught to massage partners for 5 weeks during pregnancy	STAI (anxiety) DAS (couple r'ship) PFAS (bonding) End of intervention (AN)	Anxiety decreased and marital adjustment scores increased for treatment group compared to controls; there was no difference in bonding scores.	Moderate
Li et al, 2009 Taiwan	RCT N=87 universal primiparous couples (TG=45, CG=42) Majority educated	Antenatal group delivered to couples. 4 hr class on labour & delivery; fathers concerns; ways to support partner.	STAI (anxiety) 2 hrs PN	State anxiety decreased in the treatment group compared to controls.	Good

Author and location	Design and sample	Description of intervention	Measures (construct) and outcome time points	Key results	Quality rating*
Matthey et al, 2004 Australia	RCT N=199 universal primiparous couples (TG=66, CG=74+59) Mostly educated.	Antenatal group delivered to couples. 1 x additional antenatal class on preparing for parenthood with partner.	CES-D (Depression) POMS (Stress) PSOC (parenting competence) 6 wks PN and 6 months PN	No significant impact found on any of the outcomes.	Moderate
Pfannenstiel & Honig, 1995 US	RCT N=67 Low SES primiparous fathers (TG=34, CG=33) Low education, low income fathers	Antenatal group delivered to fathers. 2x 90 min session on capabilities of fetus/newborn (Info and Insights about Infants)	Knowledge of infant scale 12-20 wks after intervention (PN)	A significant difference ($p < 0.0001$) was found between control and treatment fathers' post-test knowledge of infant correct (KOI CORR) scores.	Poor
Pretoruis et al, 2006 US	Non-comparative study N=65 universal fathers, unknown parity (No CG) No characteristics provided	Antenatal intervention delivered to fathers. Men present for ultrasound in which anatomic features are pointed out	MFA (bonding) After ultrasound	MFA total score showed a significant change in attitude of the parent toward the fetus before and after the 3D/4DUS ($p = .007$)	Poor
Righetti et al, 2005 Italy	RCT N=44 universal mixed parity fathers (TG=22, CG=22) Italian, high school or above education.	Antenatal intervention delivered to fathers. Men observed ultrasound	PAAS (bonding) 2 weeks after ultrasound	No significant impact found on any of the outcomes.	Moderate
Ross, 2001 Scotland	RCT N=123 universal primiparous couples split into 4 groups (1 TG, unknown numbers) No characteristics provided	Antenatal group delivered to couples. 2x additional sessions with accompanying workbook	HADS (anx and dep) STAI (anxiety) EPDS (depression) DAS & communication (relationship) PSI (parenting stress) 1, 2, 3, 4 and 6 mths PN	No significant impact found on any of the outcomes.	Poor

Author and location	Design and sample	Description of intervention	Measures (construct) and outcome time points	Key results	Quality rating*
Salonen et al, 2011 Finland	Quasi-experimental N=438 Universal mixed parity fathers (TG=202, CG=236) Mostly well educated	Antenatal sessions delivered to fathers. Online support for breastfeeding, parenting and infant care inc peer support forum.	Parenting satisfaction Parenting self-efficacy After birth and 6-8 wks PN	No significant impact found on any of the outcomes.	Poor
Shapiro and Gottman, 2005 US	RCT N=38 universal mixed parity couples (TG=18, CG=20) Majority white middle class, educated.	Antenatal group delivered to couples. 2 day workshop for couples on division of labour and changes in r'ship (Bringing baby home)	SCL-90 (depression) MAT (Marital quality) 3 and 12 months postpartum	Marital quality in the control group decreased from 3 months to 1 year, whereas it increased in the treatment group ($p < .01$) Depression at 1 year was significantly lower in the treatment group compared to controls ($p < .05$).	Moderate
Thome et al, 2013 Iceland	Quasi-experimental N=39 mixed parity couples, where female partner had symptoms of distress (No CG) No characteristics provided	Antenatal sessions delivered to couples. 4 x home visits (based on Calgary Family Nurse Model) (NB. Fathers only attended 2 visits)	EPDS (depression) STAI (Anxiety) RSES (self-esteem) DAS (r'ship) End of intervention (AN)	Of the men that completed both pre- and post-tests, ten (25%) had a clinically significant improvement on the EDS.	Poor
Tohotoa et al, 2012 Australia	RCT N=556 universal mixed parity fathers (TG=303, CG=253) 50% married, mixed education, ethnicity not stated.	Antenatal group delivered to fathers. 1 x additional class, delivered by male, on role of father and what to expect postnatally	HADS (anxiety and depression) 6 wks PN	Anxiety decreased for treatment group compared to controls (p=.048). There was no impact on depression scores.	Moderate
Wockel, 2007 Germany	RCT N=100 universal primiparous fathers (TG=52, CG=48) Mostly married, all educated up to age 16, little other info.	Antenatal group delivered to fathers. 1x 1hr session for men to prep for birth, delivered by male	Birth experience and participation End of intervention and 3 months PN	There was a significant difference between treament and control fathers in rates of participation in the birth (p=.018) and positive experience of birth (p=.0004)	Poor

Author and location	Design and sample	Description of intervention	Measures (construct) and outcome time points	Key results	Quality rating*
Perinatal interventions					
Doherty et al, 2006 US	RCT N = 132 universal primiparous couples (TG=65, CG=67) Mostly middle-class, mostly white	Perinatal group delivered to couples. 8 session perinatal group, 4 antenatal, 4 postnatal (2-5 mths), male-female pairs facilitating.	F-I interaction (video) Father Involvement 6 and 12 months PN	Quality of interactions was significantly better in treatment groups fathers compared to controls at both 6 and 12 months (effect size .47 and .31 respectively). Accessibility aspect of involvement was significantly greater for treatment groups (effect size .42 and .30 at 6 and 12 months).	Good
Feinberg and Kan, 2008/2009 US	RCT N=152 universal primiparous couples (TG=79, CG=73) Majority (90%) white, married, educated.	Perinatal group delivered to couples. 8x classes on communication and co-parenting (Family foundations)	2008: CES-D (depression) Parent-child dys interaction 2009: F-I interaction (video) Couple relationship (video) 6 months PN and 1 yr PN	2008 - Treatment group had significantly lower levels of parent–child dysfunctional interaction ($p < .05$). No impact on depression. 2009 - In F-I interactions, treatment group had higher postivity and lower negativity, and intervention fathers showed significantly more warmth to partner.	Good
Halford et al, 2010 Australia	RCT N= 71 primiparous couples with relationship distress (TG= 35, CG= 36) Over 90% Caucasian, 70% married, majority well educated.	Perinatal sessions delivered to couples. 6 session perinatal (up to 4 mths) mixed-format program: F2F, home, telephone, focused on couple functioning, delivered by midwives	DAS (Couple r'ship) Couple comm'tion (observed and rated) PSI (Parenting stress) End intervention, 5 and 12 months PN	No significant impact found on any of the outcomes.	Good

Author and location	Design and sample	Description of intervention	Measures (construct) and outcome time points	Key results	Quality rating*
Schulz et al, 2006	RCT N= 66 Universal primiparous couples (TG=28, CG=38) 83% married, 87% Caucasian, 52% college educated.	Perinatal group delivered to couples. 2.5hr weekly classes for 24 weeks. Group led by married couple. Topics include couple functioning and parenting.	MAT (marital satisfaction) 6, 18, 42 and 66 mths PN	There was significantly less decline in marital satisfaction for treatment fathers compared to controls. Effect size was estimated to be medium.	Good
Wood et al, 2012 US	RCT N=5102 unmarried mixed parity couples (TG=2553, CG=2549) Mixed ethnicity (~50 African American), mostly low earners.	Perinatal group delivered to couples. Building Strong Families - group education on r'ship skills. Approx 40 hours of input from between 6 weeks to 5 months.	CES-D (Depression) Relationship quality Father Involvement 15 months after applying for program	There was no improvement in the quality of couples' relationships or ability to manage their conflicts, and no impact on fathers' self-reported engagement with their children. Treatment group fathers experienced fewer depressive symptoms than the control group.	Moderate
Postnatal interventions					
Cheng et al, 2011 Canada	RCT N=24 universal fathers, unknown parity (TG=12, CG=12) Majority caucasian, middle class, well educated	Postnatal group delivered to fathers. 4 x classes on infant massage	PSI (parenting stress) End of intervention (PN)	Parenting stress was significantly lower in the treatment group compared to controls (p=.05)	Poor
Cullen et al, 2000 US	RCT N=22 universal fathers, unknown parity (TG=11, CG=11) 68% white, middle to upper SES.	Postnatal session delivered to fathers. Father taught to massage infant for 15 mins before bed for 1 month. Trained by therapist and with video.	F-I interaction (video) Father involvement End of intervention (PN)	There was a significant difference between the treatment group and control group from first to last day on interaction behaviour ratings, and overall caregiving time.	Moderate

Author and location	Design and sample	Description of intervention	Measures (construct) and outcome time points	Key results	Quality rating*
Er-mei et al, 2017 Taiwan	RCT N=83 universal primiparous fathers (TG=41, CG=42) Half were college graduates	Postnatal sessions delivered to fathers. 3x 15 mins session in hospital with info and support to provide skin-to-skin contact.	FCAS (attachment) End of intervention (PN)	Mean post-test score on FCAS was significantly higher for the treatment group (p<.001)	Moderate
Hall et al, 2015 Canada	RCT N=235 couples with infants (6-8 mths) with moderate sleep problems (TG=117, CG=118) Majority married, mid-high income/education, mixed ethnicities.	Postnatal group delivered to couples. 1x 2hr sleep teaching group session + 4x phone calls to provide support	CES-D (depression) Sleep quality Cognitions re infant sleep 6 wks post intervention (PN)	No significant impact found on any of the outcomes.	Good
Magill-Evans, 2007 Canada	RCT N=162 universal primiparous fathers (TG=81, CG=81) Majority white, mostly educated.	Postnatal sessions delivered to fathers. 2 x home visits with video feedback for fathers @ 5 months PN. Delivered by nurse	PSOC (parenting sense of competence) NCATS (F-I interaction) 8 mths PN	Average NCATS scores for fathers in the treatment group increased significantly more than controls (p = .001). There was no significant difference in PSOC scores.	Good
Scholz and Samuels, 1992 Australia	RCT N=32 universal primiparous couples (TG=16, CG=16) No characteristics provided	Postnatal session delivered to couples. 1 hr home visit with demo of infant massage @ 4 wks PN	Diary with time spent on activities; F-I interaction (video) KMS (Marital satisfaction) Rosenberg SES (self-esteem) CES-D (depression) 8 wks post intervention (PN)	In time diaries treatment group fathers bathed infants more often (p<.05); In observations, total score was sig higher for treatment group (p<.0001); Treatment fathers showed higher levels of overall marital satisfaction post-intervention (p< 0.05); Treatment group showed a sig reduction in CES-D scores (p< 0.01)	Moderate

TG (treatment group), CG (control group), AN (antenatal), PN (postnatal), ABS (Bradburn Affect balance scale), BSES-SF (Breast feeding self-efficacy scale- short form), CCS (couple communication scale), CES-D (Center for Epidemiologic Studies – Depression), CSI (couple satisfaction index), CSS (couple satisfaction scale), CTS (conflict tactics scale), DAS/DAS-R (dyadic adjustment scale – revised), DASS (depression anxiety stress scale), EPDS (Edinburgh postnatal depression scale), FCAS (father child attachment scale), FFMO (five facet mindfulness questionnaire), HADS (hospital anxiety & depression scale). KMS (Kansas marital satisfaction scale), MAT (marital adjustment test), MFA (maternal fetal attachment), NCATS (Nursing Child Assessment Teaching Scale), PAAS (paternal antenatal attachment scale), PANAS (positive and

negative affect schedule), PFAS (paternal fetal attachment scale), POMS (profile of mood states), PSI (parenting stress index), PSOC (parenting sense of competence), RELATE (relationship evaluation inventory), RSES (Rosenberg's self-esteem scale), SBQ (supportive behaviour questionnaire), SCL-90 (Derogatis symptom checklist), SF-36 (Short form health survey), SPQS (Swedish parenthood stress questionnaire), STAI (state trait anxiety inventory), STAXI (state anger inventory), TAS (transition adjustment scale), W-DEQ (Wijma Delivery experience questionnaire)

*Rated on a scale using a combination of items from the CASP and Downs & Black (1998). Poor </= 6, moderate >6-8, good >8 quality.

3.1.3.1 Location

Sixteen out of the 34 studies were conducted in the US (Bryan, 2000; Coffman, Levitt, & Brown, 1994; Cullen, Field, Escalona, & Hartshorn, 2000; Diemer, 1997; Doherty, Erickson, & LaRossa, 2006; Feinberg & Kan, 2008; Field et al., 2008; Gambrel & Piercy, 2015a; Gjerdingen & Center, 2002; Hawkins, Lovejoy, Holmes, Blanchard, & Fawcett, 2008; Latifses, Estroff, Field, & Bush, 2005; Pfannenstiel & Honig, 1995; Pretorius et al., 2006; M. S. Schulz, Cowan, & Cowan, 2006; Shapiro, Nahm, Gottman, & Content, 2011; Wood, Moore, Clarkwest, & Killewald, 2014), 5 in Australia (Halford, Petch, & Creedy, 2010; Hauck, Cooper, L, Ronchi, & Foley, 2015; Matthey, Kavanagh, Howie, Barnett, & Charles, 2004; Scholz & Samuels, 1992; Tohotoa et al., 2012), 3 in Canada (Cheng, Volk, & Marini, 2011; Hall et al., 2015; Magill-Evans, Harrison, Benzies, Gierl, & Kimak, 2007), 3 in Taiwan (Er-Mei, Gau, Chieh-Yu, & Lee, 2017; Hung, Chung, & Chang, 1996; Li et al., 2009), 2 in the UK (Daley-McCoy, Rogers, & Slade, 2015; Ross, 2001), and 1 in each of Sweden (Bergström, Kieler, & Waldenström, 2011), Finland (Salonen et al., 2011), Germany (Wöckel, Schfer, Beggel, & Abou-Dakn, 2007), Italy (Righetti, Dell'Avanzo, Grigio, & Nicolini, 2005), and Iceland (Thome & Arnardottir, 2013).

3.1.3.2 Participant characteristics

Across all studies there were a total of 9832 fathers (max 5102, min 22, median 93).

Fourteen studies specifically targeted primiparous couples i.e. couples who were having their first baby (Bryan, 2000; Daley-McCoy et al., 2015; Doherty et al., 2006; Feinberg & Kan, 2008; Gambrel & Piercy, 2015a; Gjerdingen & Center, 2002; Halford et al., 2010; Hawkins et al., 2008; Hung et al., 1996; Li et al., 2009; Matthey et al., 2004; Ross, 2001; Scholz & Samuels, 1992; M. S. Schulz et al., 2006) and 3 targeted primiparous fathers (Er-Mei et al., 2017; Magill-Evans et al., 2007; Wöckel et al., 2007). Others were either mixed parity or did not include information on parity.

Eight studies targeted fathers only (Cheng et al., 2011; Cullen et al., 2000; Er-Mei et al., 2017; Hauck et al., 2015; Magill-Evans et al., 2007; Pfannenstiel & Honig, 1995; Tohotoa

et al., 2012; Wöckel et al., 2007), while the remainder delivered their intervention to the couple, but reported outcomes separately.

All except four studies reported on universal interventions, that is, interventions that are available to all families and do not specifically target families with risk factors. Of those that were targeted, one study focused on fathers with 'low-education' (no details as to how this was defined) (Pfannenstiel & Honig, 1995), one on parents of infants with moderate sleep problems (Hall et al., 2015), one on emotionally distressed women (no details on how this was defined) (Thome & Arnardottir, 2013), and one on unmarried couples (Wood et al., 2014). None targeted fathers due to their mental health status.

Nearly all studies recruited majority white, married couples, with eleven studies indicating that over half their participants were university graduates, and several others describing their samples as well-educated without giving specific numbers. Six did not provide demographic details (Hauck et al., 2015; Pfannenstiel & Honig, 1995; Pretorius et al., 2006; Ross, 2001; Scholz & Samuels, 1992; Thome & Arnardottir, 2013) and three had more of a mixed sample, for example, with only half of the sample being married (Tohotoa et al., 2012), around half being from African American backgrounds (Wood et al., 2014), or being defined as 'low to medium socio economic status' (Field et al., 2008).

3.1.3.3 Intervention characteristics

A description of the characteristics of all 34 studies is provided here. A more detailed summary of the intervention characteristics of studies which were rated as moderate or good quality (n=25) and which were retained for the synthesis can be seen in Appendix 7.

Antenatal interventions

Seventeen studies reported on antenatal education groups either for couples (Bergström, Kieler, & Waldenström, 2009; Bryan, 2000; Coffman et al., 1994; Daley-McCoy et al., 2015; Diemer, 1997; Gambrel & Piercy, 2015a; Gjerdingen & Center, 2002; Hawkins et al., 2008; Hung et al., 1996; Li et al., 2009; Matthey et al., 2004; Ross, 2001; Shapiro et al., 2011) or fathers (Hauck et al., 2015; Pfannenstiel & Honig, 1995; Tohotoa et al., 2012; Wöckel et al., 2007) (NB. Matthey split the genders and then brought them back

together again – it has been classed as a couple intervention here). These were all universal interventions, apart from one study (Pfannenstiel & Honig, 1995) which targeted low SES fathers.

Out of the four antenatal groups which were specifically for men, three were delivered by a male practitioner (Hauck et al., 2015; Tohotoa et al., 2012; Wöckel et al., 2007). All four were relatively brief involving either a one-off session in addition to standard classes (i.e. the antenatal classes that are offered to all parents to provide information about the upcoming birth) (Hauck et al., 2015; Tohotoa et al., 2012; Wöckel et al., 2007), or two 90-minute additional sessions (Pfannenstiel & Honig, 1995).

The groups for couples were of mixed intensity, ranging from a single class on partner support (Coffman et al., 1994) to 8 classes over and above standard care (Diemer, 1997). Four groups focused specifically on preparation for the birth (Bergström et al., 2009; Diemer, 1997; Hung et al., 1996; Li et al., 2009), while the remaining nine focused on adjusting to the postnatal period, including topics such as partner support, understanding new-born behaviour, and division of labour (Bryan, 2000; Coffman et al., 1994; Daley-McCoy et al., 2015; Gambrel & Piercy, 2015b; Gjerdingen & Center, 2002; Hawkins et al., 2008; Matthey et al., 2004; Ross, 2001; Shapiro et al., 2011).

One study reported on antenatal education for individual couples (Thome & Arnardottir, 2013). This involved 4 home visits, two of which were attended by fathers.

Two studies reported on fathers being present for 3/4D ultrasounds during pregnancy (Pretorius et al., 2006; Righetti et al., 2005). These were both universal, mixed parity populations in which foetal attachment was the main outcome.

Two studies reported on interventions where fathers were taught to massage their partners during the antenatal period (Field et al., 2008; Latifses et al., 2005). These were both universal, mixed parity populations, in which fathers learned specific techniques and were then asked to carry out massages for a designated period during the pregnancy.

One study reported on an antenatal internet-based educational intervention for couples (Salonen et al., 2011). This was a universal, mixed parity population. The intervention

focused on adjusting to the postnatal period, including supporting breastfeeding and infant care.

Perinatal interventions

Five studies reported on interventions providing both antenatal and postnatal classes (Doherty et al., 2006; Feinberg & Kan, 2008; Halford et al., 2010; M. S. Schulz et al., 2006; Wood et al., 2014). Three of these were universal group interventions for primiparous couples, providing information primarily on co-parenting and supporting couple functioning (Doherty et al., 2006; Feinberg & Kan, 2008; M. S. Schulz et al., 2006). One was aimed specifically at unmarried couples (Wood et al., 2014), and one was aimed at couples with relationship stress (Halford et al., 2010). Both of these had a focus on relationship skills. All of these perinatal interventions provided a relatively high level of input, with a minimum of 6 sessions across the perinatal period.

Postnatal interventions

Three studies reported on infant massage classes, delivered either to a group of fathers (Cheng et al., 2011), to individual fathers (Cullen et al., 2000), or to individual couples (Scholz & Samuels, 1992). These were all universal interventions.

Three studies reported on interventions providing postnatal education either to individual fathers (Er-Mei et al., 2017; Magill-Evans et al., 2007), or groups of couples (Hall et al., 2015). The two fathers-only interventions were both universal and delivered to primiparous men. They included hospital-based support with skin-to-skin contact (Er-Mei et al., 2017), and a home-based video-feedback intervention (Magill-Evans et al., 2007). The group for couples was a CBT group aimed at parents of infants with moderate sleeping problems, focused on improving sleep quality (Hall et al., 2015).

3.1.3.4 Outcomes

Table 2 summarises the outcome measures used across the domains of mental health, the couple relationship and parenting.

Mental health

Twenty-three studies report on outcomes related to mental health. Ten of these have mental health as a primary outcome of the intervention. The others were primarily focused on enhancing the couple relationship or parenting variables, but also included measures of mental health. As can be seen in Table 2, a wide range of different instruments were used, measuring symptoms of depression, anxiety, stress, mood and birth experience. The majority of these were validated measures, with only one paper using a measure that was created for the study (Wockel et al, 2007).

Couple relationship

Sixteen studies reported on outcomes related to the couple relationship. In ten of these, the primary focus of the intervention was on enhancing the couple relationship, with associated primary outcomes being measures of these. The other six studies measured aspects of the couple relationship, but not as the primary outcome. As highlighted in Table 2, aspects of the relationship included satisfaction, communication, support, adjustment and quality. The majority of measures were pre-existing validated scales, with one study creating a questionnaire measure specifically for the study (Wood et al, 2014), and one study using an observational measure created for the study (Feinberg et al, 2008).

Parenting and bonding

Seventeen studies reported on outcomes related to parenting and bonding. Eleven of these had parenting/bonding as a primary outcome. Domains included parenting beliefs, knowledge of and attitude towards the baby, attachment, involvement, and father-infant interactions. Those studies measuring father-infant interaction used observational measures, while other outcomes were measured using questionnaires. Five studies developed measures specifically for the study.

Table 2 – Outcome measures used in included studies

Name of measure (authors)	**Authors of study**
Mental health measures	
Depression and anxiety	
Zung's self-rating depression and anxiety scales (Zung, 1986)	Hung et al

State trait anxiety Inventory (R. Spielberger, Gorsuch, & Lushene, 1970)	Li et al Latifses et al Field et al Ross Thome
Centre for Epidemiological Studies Depression Scale (Radloff, 1977)	Matthey et al Feinberg et al Wood et al Hall et al Field et al
Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983)	Tohotoa et al Ross
Depression, Anxiety and Stress Scales (Lovibond, 1998)	Hauck et al Gambrel and Piercy
Edinburgh Postnatal depression Scale (Cox et al., 1987)	Daley-McCoy et al Ross Thome
Symptom Checklist 90 (Derogatis, Lipman, & Covi, 1973)	Shapiro and Gottman
Taylor Manifest Anxiety Scale (Taylor, 1953)	Feinberg et al
Brief symptom inventory (Derogatis & Melisaratos, 1983)	Diemer
Mood/affect/stress	
Profile of Mood States (Lorr, McNair, & Droppleman, 1971)	Matthey et al
Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988)	Gambrel and Piercy
SF-36 Health survey (Brazier et al., 1992)	Gjerdingen and Centre
Bradburn Affect Scale (Bradburn, 1969)	Coffman et al
State Anger Inventory (C. D. Spielberger, Ritterband, Sydeman, Reheiser, & Unger, 1995)	Field et al
Birth experience	
Wijma delivery experiences questionnaire (Wijma, Wijma, & Zar, 1998)	Bergstrom et al
Birth fears, experience of the labor, satisfaction with participation during the birth (created for the study)	Wockel
Postnatal parenting stress	

Parenting stress index (Abidin & Abidin, 1990)	Bergstrom et al (adapted version) Halford et al Cheng et al Ross
Couple relationship measures	
Satisfaction	
Couple satisfaction index (Funk & Rogge, 2007)	Gambrel and Piercy
Couple Satisfaction Scale (Olson, Fournier, & Druckman, 1983)	Daley-McCoy et al
Kansas Marital Satisfaction Scale (Schumm et al., 1986)	Gjerdingen and Centre Scholz and Samuels
Relationship Satisfaction scale (Coffman, Levitt, Deets, & Quigley, 1991)	Coffman et al
Communication and interaction	
Couple Communication Scale (Olson et al., 1983)	Daley-McCoy et al
Conflict Tactics scale (Straus, 1979)	Diemer
Observational rating scale – created for the study	Feinberg et al Halford et al
Support	
Received Support Index (Levitt, Coffman, Guacci-Franco, & Loveless, 1994)	Coffman et al
Supportive behaviour questionnaire (Wapner, 1976)	Diemer (adapted for the study)
Social network support scale (Fischer, 1982)	Diemer (adapted for the study)
Adjustment and quality	
Marital Adjustment Test (quality and satisfaction) (Locke & Wallace, 1959)	Shapiro and Gottman (quality scale only) Schulz et al
Dyadic Adjustment Scale (quality and satisfaction) (Spanier, 1987)	Hawkins et al Latifses et al Halford et al Ross

	Thome
The relationship questionnaire (Figueiredo, Field, Hernandez-Reif, & Diego, 2007)	Field et al
Measure created for the study	Wood et al
Parenting measures	
Parenting beliefs	
Parenting sense of competence scale (Ohan, Leung, & Johnston, 2000)	Matthey et al Hauck et al Magill-Evans et al
Parenting satisfaction (Pridham & Chang, 1989)	Salonen et al
Parenting self-efficacy (Salonen et al., 2009)	Salonen et al
Knowledge and attitude	
Attitude toward the baby – developed for the study	Coffman et al
Knowledge of infant scale (Epstein, 1980)	Pfannenstiel and Honig (adapted for study)
Attachment	
Paternal-fetal attachment (Weaver & Cranley, 1983)	Latifses et al
Paternal Antenatal Attachment Scale (Condon, 1993)	Righetti et al
Maternal Fetal attachment (Cranley, 1981)	Pretorius et al
Father-Child Attachment Scale (Yang, 1999)	Er-mei et al
Father involvement	
Parental Responsibility Scale (McBride, 1990)	Doherty et al
Childcare scale created for the study	Cullen et al
Father involvement scale developed for the study	Wood et al
Father-infant interactions	
Observational measure – Parent Behaviour Rating Scale (Erickson & Egeland, 1990)	Doherty et al
Observational measure – created for the study	Feinberg et al
Observational measure – maternal behaviour rating scale (Mahoney, Powell, & Finger, 1986)	Cullen et al (adapted for the study)
Observational measure – created for the study	Scholz and Samuels
Observational measure – NCATS (Sumner & Speitz, 1994)	Magill-Evans et al Bryan et al

3.1.4 Narrative synthesis

This section provides a detailed account of the 25 included studies, identifying the main components and outcomes of the interventions. The studies are grouped principally by their primary outcome i.e. mental health, couple relationship or parenting. However, as many of the studies included secondary outcomes that are also within these three headings, they are sometimes summarised under more than one heading. Within these groupings, the studies are further grouped by the timing of the intervention i.e. antenatal, perinatal or postnatal. As explained in Chapter 2, studies rated as poor quality (n=9) are not included here due to their lack of detail and/or poor study design.

At the end of each subheading, key findings are summarised, including identifying similarities and differences between the designs and formats. As well as noting explanations that study authors provide for their findings, these summaries draw on data from harvest plots of five intervention components (timing, intensity of input, primary outcome, group versus individual delivery, and father-only component). They also draw on data from Table 3 below, which shows the relationships between 6 different delivery formats and 13 content topics of the interventions and the impact on the three outcomes. For each outcome, numbers in the columns represent the total number of studies which include that component (total), the number which showed a beneficial impact (yes) and the number which did not show a beneficial impact (no). Numbers in bold show a trend towards there being a beneficial impact of the component across studies. Appendix 7 is a more detailed version of this table which shows individual components for each study.

Table 3 - Components of interventions and relationship to impact on outcomes

	Mental health impact (n=19)			Couple r'ship impact (n=13)			Parenting impact (n=11)		
	Total	Yes (9)	No (10)	Total	Yes (8)	No (5)	Total	Yes (6)	No (5)
Delivery format									
Didactic/educational	8	3	5	4	3	1	3	2	1
Experiential/practical	10	**6**	**4**	8	**7**	**1**	7	**5**	**2**
Discussion	15	7	8	10	**6**	**4**	7	3	4

Worksheets/handouts	12	4	8	7	3	4	7	3	4
Demonstrations/videos	6	2	4	5	3	2	5	**5**	**0**
Homework	8	4	4	6	4	2	3	2	1
Content topic									
Preparation for birth	6	2	4	2	1	1	0	0	0
Pregnancy massage	1	1	0	1	1	0	1	0	1
Own emotions/ thoughts	2	1	1	2	2	0	1	1	0
Role of the father	7	4	3	3	2	1	2	1	1
Conflict management	4	2	2	4	2	2	3	2	1
Problem solving	6	2	4	5	3	2	4	2	2
Couple communication	8	4	4	10	5	5	4	2	2
Managing expectations	8	2	6	7	3	4	4	2	2
Parenting strategies	3	1	2	3	**3**	**0**	3	**3**	**0**
Infant care	6	2	4	3	2	1	4	3	1
Infant development	4	2	2	2	1	1	2	2	0
Parent-infant interaction	1	1	0	1	0	1	3	2	1
Infant massage	1	1	0	1	1	0	2	2	0

3.1.5 Mental Health outcomes

Nineteen studies reported on mental health outcomes. Details of the delivery formats and content topics for each intervention can be seen in Appendix 7, along with whether or not the intervention impacted on mental health outcomes. For studies that included mental health outcomes, common delivery formats included discussion (n=15), use of worksheets or handouts (n=12) and experiential or practical tasks (n=10). The most frequently covered topics were couple communication (n=8), managing expectations (n=8) and role of the father (n=7).

3.1.5.1 Antenatal interventions

Seven studies explored the impact of antenatal groups on fathers' mental health, with this being the main outcome. Four of these groups were focused solely on preparation for childbirth and three on preparation for childbirth and the early parenting experience (as outlined below).

3.1.5.1.1 Interventions focused on preparation for childbirth

In an early study in Taiwan, Hung et al (1996) explored the effects of three 2-hour childbirth classes on first time fathers' (n=100) depression and anxiety symptoms following participation in their partner's labor. Treatment group couples (n=50) attended sessions over 3 consecutive days towards the end of pregnancy, with a focus on the physiology and psychology of pregnancy and birth, including normal changes, fetal development and the role of the partner during labor. Sessions involved a mixture of lectures, videos and discussion and were led by a maternity nurse. The paper does not state the setting in which classes took place. Control group couples (n=50) did not attend classes (in Taiwan, there are no standard classes that fathers attend). Outcomes were measured during a home visit on the first day postpartum using Zung's self-rating depression and anxiety scales (Zung, 1986). There was no significant impact of the intervention on depression or anxiety scores (p =.77 and p=.43 respectively). There were some key limitations to this study. The authors note that the sample is limited to those fathers who chose to attend their partner's labor (which is not the norm in Taiwan) and the study did not use random allocation to groups. Furthermore, there was no longer term follow up beyond the first postpartum day, so it is not possible to tell if there were any differences between the groups over a longer time period.

Also in Taiwan, Li et al (2009) report on a study of a 4-hour childbirth education group for first time parents, which aimed to reduce fathers' anxiety (n=87). Fathers who were randomly allocated to the treatment group (n=45) attended a single session in the hospital with their partner where they discussed concerns about the delivery, practiced relaxation strategies and learned how to assist their partners during labor. The session included providing information, small group discussions, and watching videos, and was led by a maternity nurse who was the lead author of the study. Participants also received written

information to practice at home. Control group fathers (n=42) received a leaflet with similar information (it was not usual for fathers to attend any other classes with their partner). Outcomes were measured 2 hours postpartum using the self-report State Anxiety Inventory (R. Spielberger et al., 1970). There was a significant difference in state anxiety between the treatment and control group (p=.001) indicating lower anxiety for fathers who attended the class. The authors describe how the classes may help fathers to develop greater self-confidence by acquiring skills and knowledge which help them to fulfil their role during the birth, thus reducing anxiety. However, as above, the sample is limited to those fathers who chose to attend their partner's labor and there was no longer term follow up of participants to explore if effects persist over time.

Wockel et al (2007) report on a father-only antenatal session in Germany, led by a male obstetrician, which aimed to improve experience of the birth and partner support during delivery. Men (n=100) were randomised to receive either standard classes with their partner plus the 1-hour father-only class, or standard classes alone (it was normal for couples at this hospital in Germany to attend classes as part of preparation for the birth). The treatment group fathers (n=52) were separated from their partners during the week six class and taken to an additional classroom. Here they had the opportunity to express fears about being in the delivery room, were given techniques to help manage stress and support their partner and given information about operative births. Control group fathers (n=48) did not have this additional session. Outcomes were measured at the end of the course and 3 months postpartum. They included questionnaires adapted for the study to ask about birth fears, their experience of the labor, and how satisfied they were with their participation during the birth. Men in the treatment group were more likely to feel satisfied with the support they gave their partner, more likely to participate in the delivery, and less likely to judge the birth experience negatively (*p* values are not provided for these outcomes). However, the questionnaires used were developed for the study and were not validated. Furthermore, few statistical details of outcomes are provided by the authors, making it difficult to judge the results of the study. The authors report that a key part of the intervention was the delivery by a male practitioner, which participants reported as helpful to express their fears. However, similarly to the quantitative results, not enough details are provided to assess these outcomes and therefore results should be interpreted with caution.

Bergstrom et al (2009) examined the effects of an antenatal group for natural childbirth preparation compared to standard care on birth experience and parenting stress across 15 antenatal clinics in Sweden. Couples (n= 1064) were randomised to receive one of two models of antenatal education, both of which were delivered by experienced midwives and comprised four 2-hour sessions during pregnancy and one follow-up session within 10 weeks after delivery. In the treatment group (n=529) classes focused on preparation for natural childbirth, including non-pharmacological methods of pain relief, the partner's role during labor, and breathing and massage techniques. In the control group (n=535) the standard model of care in Sweden was followed, including information about childbirth and parenting, pain relief and possible complications. Outcomes were measured at 3 months postpartum using the self-report Wijma delivery experiences questionnaire (Wijma et al., 1998)and the Swedish Parenthood Stress Questionnaire (adapted from the Parenting Stress Index (Abidin & Abidin, 1990)). There were no significant differences between the groups on parenting stress or experience of childbirth (these results are stated in the text but no statistical details are provided). In a later paper (Bergström et al., 2011), the same trial data is used to explore impacts of the two models of care for men who suffer from fear of childbirth, as measured by the Wijma delivery expectations questionnaire (n=83). Outcomes are scores on the Wijma delivery experiences questionnaire. The authors report that men with antenatal fear who were in the treatment group (n=39) rated childbirth as less frightening that those who were in the control groups (n=44) (OR 0.3, CI 0.10-0.95). They suggest that this may be due to the focus on practical training in how men can help during labor, which provided them with practical techniques and coping strategies that they could use. However, this was an unplanned analysis and the sample size is much smaller than the main study, so results should be interpreted with caution.

Based on these four studies (Bergström et al., 2009; Hung et al., 1996; Li et al., 2009; Wöckel et al., 2007) there is limited evidence that additional information about childbirth and partner support during labor or skills related to breathing and stress management may be helpful in reducing postnatal paternal depression, but some evidence for improvements in anxiety or stress or improving experience of the birth. However, it may be that this is very specific anxiety related to the birth, rather than more general anxiety. The studies provided a mix of information and skills-based input, with authors suggesting that the

practical element may have been particularly helpful. However, the two studies in Taiwan only measured outcomes immediately postpartum, with no longer term follow-up, making it difficult to know whether any impacts of the interventions were present later into the postnatal period. Furthermore, the limited reporting of statistical results in the studies in Germany and Sweden make it difficult to draw conclusions about these outcomes. Despite this, the results from Bergstrom et al that showed a beneficial effect for fathers with birth fear indicate that this may be useful as a targeted intervention.

3.1.5.1.2 Interventions focused on preparation for the postnatal period

Three studies had a primary aim to improve fathers' mental health in a single-session antenatal group with a focus on preparing for parenthood. These studies were all from Australia and all provided the intervention in addition to standard antenatal classes provided by the hospital where they were set. All three included a father-only component.

Matthey et al (2004) explored the impact of an additional father-only antenatal session focused on preparing for parenthood on couples' psychosocial adjustment in Australia. Couples (n=199) were randomly assigned to one of three groups: the treatment group (n=66), which consisted of standard classes (6 weekly sessions covering physical aspects of pregnancy and birth, delivery procedures and breastfeeding) plus an additional session focused on the couple relationship; a non-specific control (n=74), which consisted of standard classes plus an additional session focused on infant development and play; or standard antenatal classes alone (n=59). Treatment group fathers attended a session led by the first author (a male psychologist) and a female counsellor, where they were able to discuss postpartum concerns in separate gender groups and then with their partners. This included developing strategies for managing stress and normalising feelings of isolation or lack of confidence. Outcomes were measured at 6 weeks and 6 months postpartum using the Centre for Epidemiological Studies Depression Scale (CES-D) (Radloff, 1977), and the Profile of Mood States (POMS) (Lorr et al., 1971). There were no significant effects of the intervention on men's depression symptoms or stress (*p* values are not reported for these outcomes). The study reported few details about how participants were allocated to groups or any blinding procedures, and also gave little detail about statistical outcomes for men.

Tohotoa et al (2012) report on the impact of a father-only antenatal class, provided in addition to standard antenatal classes in Australia, on fathers' postnatal depression and anxiety symptoms. Men (n=556) were randomised to either the treatment group (n=303) or control (n=253). The treatment group received standard classes at the hospital with their partner, plus an additional 1-hour father-only session facilitated by a male educator (the study did not report details of who this was). Three main topics were addressed: the role of the father, the importance and benefits of breastfeeding for both mother and baby, and what to expect in the first four weeks at home with a new baby. Fathers also received social and educational support materials for 6 weeks postpartum intended to enhance support for breastfeeding and provide information about infant development and stress reduction. The control group received standard classes with their partner, which included information about labor, birth, pain relief and breastfeeding. Outcomes were measured at 6 weeks postpartum using the self-report Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983). Fathers in the treatment group had a significant decline in anxiety compared to controls (p=.048), but there was no difference in depressive symptoms (no *P* value provided). The authors also undertook a process evaluation of the intervention (Tohotoa et al., 2011), asking fathers about their experience, and reported that key things highlighted as useful were information about the transition, practical advice about problem-solving, and being able to talk to another father (the male educator). As above, the study reported few details about some of the trial procedures as well as few details about the results.

Hauck et al (2015) also report on a single 1-hour father-only antenatal class, provided as an add-on to standard classes in one hospital in Australia, and delivered by a male midwife in the third trimester. The group aimed to improve depression, anxiety and parenting sense of competence. Men (n=115) either received standard sessions with their partner plus the additional dads-only session (n=68) or standard sessions with their partner only (n=47). Group allocation was determined by the date on which couples attended the hospital classes. The treatment group received a manualised interactive session based on problem-solving and practical skills related to infant care, specifically around managing crying and nappy changing. They also received an information pack with a selection of resources to take away. Outcomes were measured at 6 months postpartum using the Depression, Anxiety and Stress Scales (DASS) (Lovibond, 1998).

The treatment group were less likely to have anxiety and stress scores in the normal range than the controls (i.e. more of them had high scores) (p=.008 and p=.021 respectively). There were no differences in depression scores (p=.143). The study had rather high attrition with only around 50% of participants completing outcome measures. Furthermore, there was not randomisation into groups and no details were provided about blinding. The authors describe their study as a feasibility study, but as they report effectiveness data it has been included here.

There is little evidence that single session antenatal groups which focus on preparing for parenthood impact on paternal mental health. All three of these Australian studies were principally father-only interventions, with outcomes measured at least 6 weeks postpartum. All were rated as moderate quality and had reasonable sample sizes. However, there was no impact on symptoms of depression, and mixed effects on anxiety (in one study (Hauck et al., 2015) the treatment group had higher scores on anxiety measures than controls). Hauck et al suggests that a one-off session may not be sufficient to impact on these outcomes, while Tohotoa et al notes that the sample had few symptoms of depression at baseline.

One study of an antenatal group did not state a primary outcome but included measures of mental health. Diemer (1997) reports on an 8-session father-focused antenatal group for couples, which aimed to reduce stress and enhance social support and the couple relationship. 83 mixed parity couples were allocated to either the 8-week treatment group (n=43) or to 8-weekly standard antenatal classes (n=40) depending on the date that they enrolled for classes. The treatment group received the same content as the standard classes (information about prenatal care, labor, delivery and postpartum care, breathing and relaxation exercises, and newborn care and feeding), but this was provided in a discussion format with an emphasis on including fathers and with the addition of encouraging communication of feelings and raising of any concerns. This included both single-gender and mixed-gender group discussions, and weekly assignments involving communication with the partner and others in their social network. Educators who usually provided standard classes were trained by the author to deliver the treatment classes. Outcomes were measured at the final session using the Brief Symptom Inventory (BSI) to measure stress (Derogatis & Melisaratos, 1983). The intervention did not impact on prenatal stress

levels (p value not reported). As the control group received similar information to the treatment group but in a different format, this suggests that the change in format from didactic to discussion-based was not sufficient to impact on stress levels. However, there are some limitations to the study as random allocation to groups was not used and there was no longer term follow-up.

Generally, there seems to be a call for men to be included in antenatal groups and provided with information, including about the birth, postnatal changes, and how to support their partner (May & Fletcher, 2013). However, based on the studies in this review there is little evidence that this would impact specifically on mental health symptoms, particularly in the postpartum. Nevertheless, as the samples in these studies did not have high baseline levels of mental health difficulties, it is not possible to say what the impact would be on higher risk groups.

3.1.5.1.3 Antenatal interventions focused on the couple relationship and parenting

Five antenatal group interventions focused on enhancing the quality of the couple relationship but included measures of mental health. They are described here and also under the heading of couple relationships.

Daley-McCoy et al (Daley-McCoy et al., 2015) examined the effect of a single-session antenatal group for couples on relationship functioning and psychological distress during the transition to parenthood in the UK. Couples who were registered to attend standard antenatal classes at a maternity hospital (n=63) were randomised to either the treatment group (n=39) or to the control group (n=26). The treatment group attended a 2-hour psychoeducational group delivered as an adjunct to existing antenatal classes and delivered by the lead author (a trainee psychologist). The group focused on promoting realistic expectations about becoming a parent and developing communication skills for good problem-solving. This was delivered through couple and group discussions, identifying areas of disagreement and applying skills to explore these with the partner. The control group attended five standard weekly classes led by a midwife (content not described in the paper). Outcomes were measured at 6 weeks postpartum by postal questionnaire, using the Edinburgh Postnatal Depression Scale (EPDS) (Cox et al., 1987).

Men in the intervention condition reported decreased psychological distress compared to the control condition (p=.023). The study was well designed, although it had a small sample size (the authors describe it as a feasibility study, but as effectiveness outcomes were reported it is included here).

Gambrel and Piercy (Gambrel & Piercy, 2015a) report on an antenatal group for couples called 'Mindful transition to parenthood' which focuses on relationship enhancement for first time parents in the US. Couples (n=66) were randomised by a coin toss to a four-week treatment group (n=32) or a waitlist control (n=34). The treatment group attended 4 weekly 2-hour sessions, which included a combination of psychoeducation around the couple relationship and experiential learning related to relational mindfulness (e.g. mindful communication, mindful touch). This involved dyadic and small group activities, as well as homework that included couple activities and daily mindfulness practice. The group was led by the first author, who is a family therapist and mindfulness practitioner, and took place in a variety of settings including community centres and birthing clinics. Outcomes were measured at the end of the intervention using the Depression and Anxiety Stress Scale (DASS) (Lovibond, 1998) and the Positive and Negative Affect Schedule (PANAS) (Watson et al., 1988). Men in the treatment group showed a significant decline in negative affect (p=.04) compared to controls, but no significant difference on positive affect (p=.37) or on overall DASS scores (p=.14). The authors also completed qualitative interviews with 13 couples (Gambrel & Piercy, 2015b) to explore their experiences of the intervention. The men noted that connecting to other fathers was an important part of the group and were pleased that there was something available for fathers. They also felt the group increased their understanding of their partners' needs and their connection to the baby. However, the study had a small sample size and did not measure outcomes beyond the end of the intervention, so it is not possible to know if intervention effects persisted.

Gjerdingen and Centre (Gjerdingen & Center, 2002) reported on an antenatal group for couples (n=129) which focused on partner support and task sharing, also based in the US. Couples attending two hospitals were randomised to either the treatment group (n=69) or a control group (n=60). The intervention group received 2 additional 30-minute 'break out' sessions on top of 5 weekly standard antenatal classes (the paper does not specify who delivered these). The breakout sessions involved couples having discussions about

the ways in which they cared for each other and completing worksheets about how they would task share after the baby arrived. The control group received 5 standard classes (no details about provided about the content of these). Outcomes were measured at 6 months postpartum by postal questionnaire, including the mental health scale from the SF-36 Health Survey (Brazier et al., 1992). There were no significant effects on mental health (p values not provided). The study was rated of good methodological quality overall, but minimal details were provided about the intervention itself and outcome measures used very few items to identify impacts.

Coffman et al (Coffman et al., 1994) examined the effect of additional content within an antenatal group for couples, designed to clarify expectations of partner support, on new parents' relationship satisfaction, emotional affect and attitude towards the baby. Couples (n=141) who had registered to attend antenatal classes across 3 hospitals in the US were randomised to the intervention group or control (numbers in each group are not given). Alongside standard classes, the intervention group completed an index of their expectations about partner support and then discussed this with their partner, followed by a whole class discussion. Control couples completed a sex role behaviour index alongside standard classes. Both groups were delivered by prenatal instructors (further details not provided). Outcomes were measured at 3 and 6 months postpartum by postal questionnaire, and included the Bradburn Affect Balance Scale (Bradburn, 1969). There were no significant effects of the intervention on outcomes (p values are not provided). The study provides few details about the process of randomisation or the outcomes. The authors suggest that more focus may be needed on motivating couples to put group learning into practice.

Shapiro and Gottman (Shapiro et al., 2011) report on the 'Bringing Baby Home' intervention, an antenatal 2-day couples' workshop aimed at enhancing marital quality in the US. Couples attending birth preparation classes at one medical centre (n=38) were randomised to the group workshop (n=18) or to a waitlist control (n=20). The treatment group received a workshop which focused on preparing couples for dealing with conflict, facilitating the father's involvement in the family, and providing information about infant psychological development. Workshops were facilitated by the second author and his wife, both clinical psychologists, and involved a mixture of lectures, demonstrations, role

play, videos and communication exercises. Outcomes were measured at home visits at 3 and 12 months postpartum, using the Symptom Checklist 90 (SCL-90) (Derogatis et al., 1973). Depression scores were lower for the intervention group compared to the controls at 12 months ($p<.05$). This study benefitted from long term follow up of the participants. Indeed, the authors note how scores tended to decline at 3 months and then improve at 1 year. This is an important difference to the studies which only measure immediate outcomes. The study also had a clear, manualised intervention based on extensive theory. However, this was a very small sample and so results need to be replicated.

Based on these five studies there is some evidence for antenatal group interventions which focus on enhancing relationships being good for mental health, specifically negative affect and depressive symptoms. Those interventions showing impacts were mixed in terms of length/intensity (2 hours, 2 days, 4 weeks) and had different focuses (mindfulness, communication skills, conflict and infant development). However, the three interventions showing beneficial impact all included a skills-based component, with opportunities for couples to put learning into practice, while the two non-beneficial interventions used discussion and worksheets only. This may have been an important feature. Additionally, Daley-McCoy et al suggest that the targets of the intervention (realistic expectations of parenthood and better communication skills) may have provided a buffering against the normal stressors of parenthood, while Gambrel and Piercy, who also included a qualitative component in the study, emphasise the importance of social support as a factor in men's outcomes, highlighting that this may be particularly novel for men who often don't receive this kind of support in the transition to parenthood. Shapiro and Gottman, in contrast, note that poor immediate outcomes may be the result of short-term increases in couple conflict as they are encouraged to express and face difficulties, with longer term outcomes being a better reflection of intervention impacts. However, it should be noted that those studies showing impact had small sample sizes without sufficient power to detect effects and so results need to be interpreted with caution.

3.1.5.1.4 Antenatal massage

One study looked at antenatal massage as a way to improve paternal mental health. Latifses et al (2005) examined the impact of pregnancy massage and relaxation on fathers' anxiety, the couple relationship and foetal attachment in a US sample. Couples were

recruited from hospital antenatal classes (n=139) and were randomised to the massage group (n=47), relaxation training (n=46), or a no treatment control group (n=46). Fathers in the massage group were taught to give their partners a 20-minute pregnancy massage and instructed to follow this routine twice a week for 5 weeks at home. The relaxation group couples were taught a 20-minute relaxation exercise to be completed twice a week for 5 weeks. The control group received no intervention. Outcomes were measured at the end of the intervention period, using the State-Trait Anxiety Inventory. The massage group showed significantly lowered anxiety scores compared to both the relaxation (p=.001) and control groups (p=.001). However, they did not measure outcomes postnatally, so it is hard to know if gains persisted. Therefore, further research is needed to establish if this skills-based intervention may be beneficial for fathers' wellbeing across the perinatal period.

In summary, there is mixed evidence related to mental health impacts of antenatal interventions. Focusing on childbirth experiences has little beneficial impact, and single sessions also seem less helpful. In contrast, focusing on the couple relationship and providing some skills-based components seems to be more helpful.

3.1.5.2 Perinatal interventions

There were no studies of perinatal interventions which had mental health as a primary outcome. However, three perinatal interventions focused primarily on improving the couple relationship and included measures of mental health.

Family Foundations (Feinberg et al., 2008, 2009) is a universal group programme delivered across the perinatal period and designed to enhance co-parenting in first time parents in the US. Couples (n=152) were recruited from childbirth education programs at two hospitals and were randomly assigned to the treatment group (n=79) or a no-treatment control (n=73). Treatment couples attended 8 interactive, psycho-educational, skills-based group sessions which aim to prepare parents for the strains of the transition to parenthood. Content included emotional self-management, conflict management, problem solving, communication and mutual support strategies that foster joint parenting. Sessions were a mixture of didactic material, exercises and behavioural rehearsal, and were delivered by a male-female team who received 3 days of training. The control group

received a brochure about selecting quality childcare. Mental health outcomes were measured after the intervention, at around 6 months postpartum by postal questionnaire, using the self-report Centre for Epidemiological Studies Depression Scale (CES-D), and the Taylor Manifest Anxiety Scale (Taylor, 1953). At 6 months postpartum there were no impacts on depression or anxiety scores (p values not reported). This was a well-conducted study with a detailed intervention manual based on extensive theory. It may have benefited from additional follow up of mental health outcomes at a later time point, but results here suggest that this intervention does not impact on paternal mental health.

Halford et al (2010) report on the Couple Care for Parents (CPP) intervention, a 6-session perinatal education programme for first-time parents in Australia, intended to combine both couple relationship education and parenting. Couples who were attending antenatal classes at one hospital (n= 71) were randomly assigned to receive either the CCP programme as a couple (n=35) or for the female partner to receive the Becoming a Parent programme (an antenatal education programme which includes a guidebook, home visit and telephone calls) (n=36). The treatment group received a mixed-format intervention, including a 6-hour group workshop, 2 home visits, and self-directed learning supported by a phone call with the CCP educator. Topics included adjustment to parenthood, relationship skills training and infant care. Both programmes were delivered by the first author, who is a clinical psychologist. Self-report outcomes were measured at 5 months and 12 months postpartum, using the Parenting Stress Index (Abidin & Abidin, 1990). There was no impact on father's parenting stress (p values not reported) at either time point. This study was rated as good quality, although the authors note that over half of eligible couples declined to take part and their sample was largely white, indicating the challenges of recruitment in the transition to parenthood.

Wood et al (2014) reported on the Building Strong Families (BSF) intervention, a perinatal group programme providing relationship skills education for low-income, unmarried couples. Its aim was to improve the relationship and increase the quality of co-parenting, as well as improving father involvement. In this large-scale RCT (n=5,102) couples across eight sites were randomly assigned either to the treatment group (n=2553) or a no-treatment control group (n=2549). The treatment group received one of three adapted curricula which involved weekly group meetings across a minimum of 6 weeks

delivering the core components of BSF. Core components were: group sessions on relationship skills which aimed to improve communication and conflict management; individual support from family coordinators who provided emotional support and encouraged attendance at group sessions; and assessment and referral to support services. Outcomes were measured at 15 months after applying for the program, and included the Centre for Epidemiological Studies Depression Scale (CES-D) (Radloff, 1977)**.** There was a significant impact on fathers' depression scores at 15 months ($p<.01$). This study has some limitations as curricula of the program were adapted for local demands and there was a high attrition rate, therefore the intervention differed across sites and outcomes were not collected for all fathers. However, the authors suggest that the impact on depression scores may be due to the social support provided by the group format, which was consistent across sites.

All three of these perinatal interventions provide relatively intensive input – all involved a group component and some also included further individualised input as well as skills-based relationship support. However, there is little evidence of impact on mental health outcomes. Only BSF (Wood et al., 2014) showed an effect on depression scores, perhaps because this was a targeted intervention with families with risk factors for difficulties. Indeed, authors (Feinberg & Kan, 2008; Halford et al., 2010) note the challenges with seeing these outcomes in samples where baseline levels of anxiety and depression are low. BSF did not have a single protocol and instead used a variety of curricula depending on the site at which it was delivered, so it is hard to say what it was that may have benefited fathers' depressive symptoms. Given that there were no impacts of this intervention on relationship quality (see section 'Couple relationship'), which was the intended target, the authors suggest that the social aspect of the group sessions may have had benefits to mental health in this targeted sample.

3.1.5.3 Postnatal interventions

Two studies described postnatal interventions that included measures of mental health symptoms.

Hall et al (2015) reported on a postnatal cognitive-behavioural group for couples in Canada whose infants had sleep difficulties. Outcomes included depression symptoms.

Couples (n=235) with a 6-8-month-old infant who was displaying behavioural sleep problems were randomised to receive either a 2-hour sleep teaching session (n=117), or a session on infant safety (n=118). The sleep teaching session involved information about infants' patterns, negative sleep associations, unrealistic expectations about sleep, as well as strategies to reduce night waking. Following this, parents received four support phone calls over two weeks to reinforce learning. The control group followed a similar format, but the session was focused on infant safety. Both groups were delivered by public health nurses who received training from the principal investigator. Mental health outcomes were measured at 6 weeks post-intervention, using the Centre for Epidemiological Studies Depression Scale (CES-D) (Radloff, 1977). Intervention group fathers did not show any significant change in depression scores compared to controls (p=.48). This was a well-conducted study with a large sample size. However, the authors' focus was on parental behaviours around sleep, and this did not impact on paternal depression symptoms.

Scholz and Samuels (1992) describe an early study looking at the effects of learning infant massage and the Burleigh Relaxation Bath technique on first-time fathers' involvement and interaction with their infant. They also measured fathers' symptoms of depression and marital satisfaction. 32 couples were randomly assigned to the treatment group (n=16) or a control group (n=16). Treatment families were visited at home at 4 weeks postpartum and given a demonstration of infant massage and the Burleigh Relaxation Bath technique, as well as an opportunity to practice the techniques themselves and a brochure to keep. They were encouraged to adapt the techniques to their baby and discover how the baby liked to be touched. The control group were also visited at home and had a discussion about infant development. Outcomes were measured at 8 weeks post-intervention using the self-report Centre for Epidemiological Studies Depression Scale (CES-D) (Radloff, 1977). Treatment group fathers had reduced depressive symptoms compared to controls (p<.01). However, again, this was only a small sample and few details are provided about the randomisation processes. Nevertheless, as the prenatal massage intervention (Latifses et al., 2005) also indicated positive outcomes, it may be that a practical focus with a tangible skill is helpful in supporting fathers' mental health symptoms (Rominov et al, 2016).

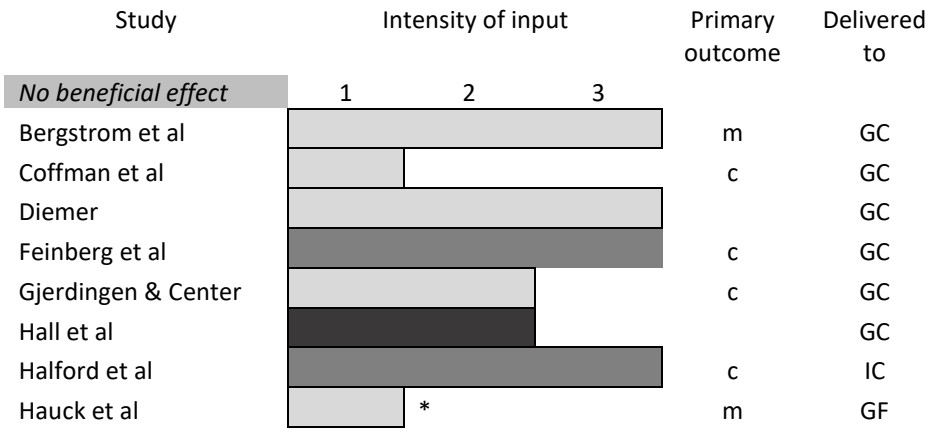
As there are only two postnatal interventions measuring mental health outcomes it is hard to draw conclusions. Furthermore, the two studies had different formats for delivery and a different focus in terms of their main outcome. More research is need to know if postnatal interventions can impact on paternal mental health outcomes.

3.1.5.4 Summary of studies with mental health outcomes

As can be seen in the harvest plot in Figure 3, 10 of the 19 studies which reported on mental health outcomes had no impact, while 9 showed a beneficial effect. The plot highlights that timing of the intervention, intensity of input, incorporating a father-only component, primary outcome, and group or individual format were not key factors in determining whether an intervention was effective or not.

There are no clear patterns for particular components being associated with beneficial impacts on mental health, although a practical element to the intervention showed a trend towards being beneficial (Table 3). This practical component included a range of things, for example, skills around couple communication, learning antenatal massage, and learning techniques for partner support during the birth. It is noted that only 2 interventions specified a focus on the parents' own thoughts and emotions, a component that is likely to be beneficial for a mental health intervention.

Other components noted by authors include social support provided by the group format (Wood), developing strategies to buffer against the normal stressors of parenthood (Daley McCoy), and targeting an at-risk sample (Halford).



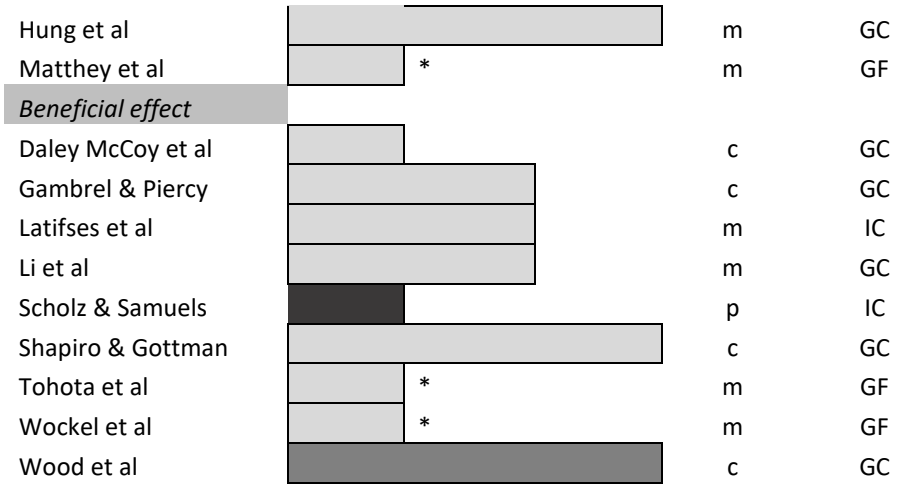


Figure 3 - Harvest plot of intervention components for studies with mental health outcomes (n=19)

Key:
Antenatal; Perinatal; Postnatal
Intensity of input: 1 = 1 session; 2 = 2-4 sessions/hours; 3 = >4 sessions/ hours
Primary outcome: m = mental health; c = couple relationship; p = parenting
Delivered to: GC = groups couples; IC = individual couples; GF = group fathers
* Father only component

3.1.6 Couple outcomes

Thirteen studies reported on couple outcomes. Common delivery formats included discussion (n=10), experiential or practical tasks (n=8), and use of worksheets or handouts (n=7). The most frequently covered topics were couple communication (n=10), managing expectations (n=7) and problem-solving (n=5).

3.1.6.1 Antenatal groups for couples

Six studies looked at the impact of antenatal groups for couples, with a primary focus on improving the couple relationship. Several of the studies have been described in detail above and so fewer details are provided here (these studies are indicated with a *).

Daley-McCoy et al* (Daley-McCoy et al., 2015) examined the effect of an antenatal group for couples on relationship functioning and psychological distress during the transition to parenthood. The study randomised couples (n=65) to a 2-hour psychoeducational group delivered as an adjunct to existing antenatal classes in the UK, or to the usual classes. The session was delivered by a psychologist and focused on promoting realistic expectations of parenthood and developing communication skills.

Outcomes were measured at 6 weeks postpartum, using the Couple Satisfaction Scale and the Couple Communication Scale, both part of the Prepare/Enrich inventory (Olson et al., 1983). Men in the intervention condition reported significantly less deterioration in couple communication compared to the control condition (p=.029), but no differences in couple satisfaction (p=.197). The study was well designed, although it had a small sample size.

Gambrel and Piercy* (Gambrel & Piercy, 2015a) reported on an antenatal group for couples called 'Mindful transition to parenthood' which focuses on relationship enhancement for first time parents in the US. Couples (n=66) were randomised to a four-week treatment group or a waitlist control. The sessions used a combination of psychoeducation around the couple relationship and experiential learning related to relational mindfulness, along with daily mindfulness practice. Outcomes were measured at the end of the intervention using the Couple Satisfaction Index (CSI) (Funk & Rogge, 2007). Men in the treatment group showed a significant improvement in relationship satisfaction compared to controls (p<.05). However, the study had a small sample size and did not measure outcomes beyond the end of the intervention.

The Marriage Moments program, described by Hawkins et al (Hawkins et al., 2008), is an antenatal intervention for first time couples in the US which focuses on developing marital virtues and partnership. Couples who were attending existing childbirth classes at 3 hospitals (n=155) were randomly assigned to one of three groups. Treatment couples (n=38) received an additional 15 minutes for 5 weeks on top of their standard childbirth classes. The additional input involved watching videos which introduced topics around normalising challenges in the transition to parenthood, marital virtues of friendship, fairness and loyalty, and creating shared goals. Videos were followed by brief discussions, and then couples were given a workbook to guide learning at home, including individual and partner exercises. Control couples either had the five standard childbirth classes (n=43) or were given the Marriage Moments materials to do themselves (i.e. without any instruction or group discussion) (n=37). Outcomes were collected at 9 months postpartum by postal questionnaire, using the Dyadic Adjustment Scale (Spanier, 1987) to measure marital quality and satisfaction. The program did not improve marital quality (p=.28) or satisfaction (p= 1.0) when compared with controls. The authors suggest

that the low intensity and mainly self-guided nature of the intervention may not be sufficient to impact on outcomes. They further suggest that a more skills-based approach may be needed to make a difference to couples. However, the sample size in each group was small, and so it may have difficult to detect any effects.

Gjerdingen and Centre* (Gjerdingen & Center, 2002) reported on an antenatal group for couples (n=129) which focused on partner support and task sharing, also based in the US. The intervention group received 2 additional 30-minute 'break out' sessions on top of standard antenatal classes, which involved completing worksheets about task sharing and discussing this with their partner. The control group received standard classes. Outcomes were measured at 6 months postpartum using a single item from the Kansas Marital Satisfaction Scale (Schumm et al., 1986). There were no significant effects on partner satisfaction (p values not reported). The study was rated as good quality, but was limited by the single-item measure used for the outcome.

Coffman et al* (Coffman et al., 1994) examined the effect of an antenatal group for couples (n=204), designed to clarify expectations of partner support, on new parents' relationship satisfaction, emotional affect and attitude towards the baby. The intervention group attended an additional class on top of standard antenatal classes which involved completing an index of their expectations and then sharing this with their partner. Control couples completed a sex role behaviour index alongside standard classes. Outcomes were measured at 3 and 6 months postpartum using a relationship satisfaction scale (used in a previous study by the same authors but not clear if validated (Coffman et al., 1991)) and the Received Support Index (also used in previous study but not clear if validated (Levitt et al., 1994)). There were no significant effects of the intervention on outcomes (p values are not reported). This study had a reasonable sample size, but the validity of the measures was unclear.

Shapiro and Gottman* (Shapiro et al., 2011) report on the 'Bringing Baby Home' intervention, an antenatal 2-day couples' workshop aimed at enhancing marital quality. Couples (n=38) were randomised to a 2-day group workshop facilitated by a married couple or to a waitlist control. The treatment group received input both about dealing with conflict and intimacy in their relationship and also about infant development. Outcomes were measured at 3 and 12 months postpartum using a subscale of the Marital Adjustment

Test (Locke & Wallace, 1959). Men's marital quality remained stable in the treatment group between 3 months and 1 year while, in comparison, it declined substantially in the control group across the first postnatal year ($p<.01$). However, this was a small sample and it was not clear how they were randomised.

One other study reported the impact of an antenatal intervention on couple outcomes, although this was not the primary outcome. This is described in detail above, with a summary here.

Diemer (1997) reports on an 8-session father-focused antenatal group for couples. 83 mixed parity couples were provided with either the treatment group or usual care (standard childbirth classes). The treatment group received the same content as the standard classes, but this was provided in a discussion format with an emphasis on including fathers and with the addition of encouraging communication of feelings and raising of any concerns. Outcomes were measured at the final session using the Social Network Support Scale (adapted for this study) (Fischer, 1982), the Supportive Behaviour Questionnaire (adapted for this study) (Wapner, 1976), and the Conflicts Tactics Scale (CTS) (Straus, 1979). The intervention had some impact on seeking social support ($p<.05$), increasing housework ($p<.01$ – this was a subscale of the SBQ), and improved reasoning skills during communication ($p<.01$ – this was a subscale of the CTS). However, there are some limitations to the study as random allocation to groups was not used and there was no longer term follow-up.

These seven studies of antenatal group interventions provided mixed evidence of effectiveness in improving the couple relationship. Those studies with larger samples which had sufficient power to detect effects did not improve couple outcomes (Coffman et al., 1994; Gjerdingen & Center, 2002; Hawkins et al., 2008), while those studies with smaller samples did report effects (Daley-McCoy et al., 2015; Diemer, 1997; Gambrel & Piercy, 2015a; Shapiro et al., 2011), so caution should be taken in interpreting these results. Furthermore, one of the studies showing impacts only measured outcomes at the end of the intervention (Gambrel & Piercy, 2015a). Where studies did have power to detect effects, both Hawkins et al and Gjerdinger & Center note that dosage may be a factor in non-significant outcomes, suggesting for example that more intensive, skills-based approaches, or more follow-up sessions may be needed. Hawkins et al also

highlight the high functioning sample in their study, suggesting that it be tested with a higher risk sample. Therefore, the quality of evidence for antenatal group interventions impacting on couples' outcomes is rather low and there is a need for more studies with power to detect effects and outcomes measured beyond the end of the intervention.

3.1.6.2 Antenatal massage

One study looked at the impact of antenatal massage on couple outcomes. Latifses et al* (2005) examined the impact of pregnancy massage and relaxation on fathers' anxiety, the couple relationship and foetal attachment in a US sample. Fathers (n=139) were randomised to the massage group, relaxation training, or a no treatment control group. Outcomes were measured at the end of the intervention period using the Dyadic Adjustment Scale. The massage group showed improved couple relationship quality compared to the no treatment group (p=.022). The authors suggest the process of massage can support couples to feel closer during pregnancy, and also that the practical element of the intervention may have a beneficial impact of fathers' wellbeing, providing a sense of being useful, which then impacts on the couple relationship. However, the lack of postnatal outcomes in the study needs to be taken into account as it is not clear if these beneficial impacts persist.

3.1.6.3 Perinatal groups

Four studies examined the impact of interventions for couples which were delivered across the perinatal period. Three of these are described in detail above, with summaries provided here (again, these are indicated with a *).

Schulz et al (2006) describe a 24-week perinatal group programme for couples in the US intended to prevent decline in marital satisfaction. This intervention is based on the programme devised by Cowan and Cowan (Cowan & Cowan, 2000). Couples who were recruited by adverts in clinics and community centres (n=66) were randomly assigned to attend the treatment group (n= 28) or a no treatment control (n=38). The treatment group attended weekly 2.5-hour groups for 24 weeks, beginning in the 3rd trimester. Groups were led by a married couple. Topics included how participants viewed themselves and their relationships, their division of family labour, their communication and problem-

solving styles, their ideas about parenting and actual parenting practices, their work and social support outside the family, and the influence of their experiences growing up on their parenting and their relationship as a couple. Outcomes were measured at several postnatal timepoints, including 6 months and 18 months postnatal (approximately 12 months after the end of the intervention) and up to child age 5 years, using the MAT to assess marital satisfaction. Fathers in the intervention group had significantly lower decline in marital satisfaction than controls (p value not reported, but effect size given as 0.27). This was a well-designed study, but the sample was rather small, and the intervention was very intensive compared to many others. Furthermore, while it is an advantage to have longer term outcomes, results are only reported at the 5-year time point, making it hard to compare with other studies in this review.

Family foundations* (Feinberg et al., 2008, 2009) is a universal group programme delivered across the perinatal period and designed to enhance co-parenting in first time parents in the US. It was devised using a similar theoretical background to the study by Schulz et al, but with the intention of reducing the number of sessions and amount of training required in order to make it more feasible to deliver. Couples (n=152) were randomly assigned to treatment or a no-treatment control. Treatment couples attended 8 interactive, psycho-educational, skills-based group sessions which aim to prepare parents for the strains of the transition to parenthood. At 1 year postpartum, outcomes were measured during a home visit, using 6-minute video-taped interactions of triadic play tasks for couple and father-infant relationship outcomes. Videos were rated using a system developed for this study, which coded aspects of parenting and dyadic couple interaction on a scale of 1-7. At 1-year postpartum, significant effects were found for the couple relationship, with fathers in the treatment group showing more warmth towards their partner ($p<.05$). This was a well-conducted study with a detailed intervention manual based on extensive theory.

Halford et al* (2010) report on the Couple Care for Parents (CPP) intervention, a 6-session perinatal education programme for first-time parents in Australia. Couples (n= 71) were randomly assigned to receive either the CCP programme as a couple or for the female partner to receive an alternative programme. Outcomes were measured at 5 and 12 months postpartum using the Dyadic Adjustment Scale (Spanier, 1987). Additionally,

couple conversations were video-taped and coded at the end of the intervention and at 5 months postpartum using a scale that rates negative communication. CPP reduced immediate negative couple communication, but these effects attenuated at the 5-month follow-up. There was no impact on men's relationship adjustment (p values not reported). This study was rated as good quality, although the authors note that over half of eligible couples declined to take part and their sample was largely white, indicating the challenges of recruitment in the transition to parenthood.

Wood et al* (2014) report on the Building Strong Families intervention, a perinatal group programme providing relationship skills education for low-income, unmarried couples. In this large-scale RCT (n=5,102) couples across eight sites were randomly assigned either to the treatment group or a no-treatment control group. Outcomes were measured at 15 months after applying for the program using a relationship quality measure developed for this study. There were no significant effects of the intervention on the couple relationship (p values not reported, effect sizes all below 0.07). This study has some limitations as curricula of the program were adapted for local demands and there was a high attrition rate, therefore the intervention differed across sites and outcomes were not collected for all fathers.

The four studies reporting on perinatal interventions aimed at enhancing the couple relationship had mixed outcomes, with two reporting positive effects and two reporting non-significant effects. Three of these were intensive group programs running over several weeks (Feinberg & Kan, 2008; M. S. Schulz et al., 2006; Wood et al., 2014), while one was a less-intensive, mixed format intervention (Halford et al., 2010). Halford et al found that immediate positive effects of the intervention attenuated by follow-up at 12 months postpartum. They therefore suggest the program may benefit from additional booster sessions. This highlights the importance of measurement beyond the end of the intervention. Wood et al, who report on a targeted intervention, was not able to find an explanation for the lack of effect on the main outcome in their study, given the intensity of the support offered. One of the studies showing an impact (M. S. Schulz et al., 2006) described a 24-week program, which is substantially more input than others and required a long-term commitment from parents across 6 months. This intervention was built on extensive theory (see Cowan and Cowan, 2000) but has only been tested with a small

sample in perinatal populations. Family Foundations, an 8-session intervention, is based on similar theory and development, but intended to be more feasible to deliver due to a shorter duration. This program has been subject to ongoing evaluation and has demonstrated positive impacts on couple outcomes at 3 years postpartum (Feinberg, Jones, Kan, & Goslin, 2010). The authors suggest that their focus on co-parenting helps build support and collaboration, which impacts positively on the couple relationship. This therefore seems to be the most promising perinatal intervention for improving the couple relationship.

3.1.6.4 Postnatal interventions

One study reported on the impact of a postnatal intervention and included a measure of couple outcomes. It is also described in detail above.

Scholz and Samuels (1992) and Samuels and Scholz (1992) (Samuels, Scholz, & Edmundson, 1992) describe an early study looking at the effects of learning infant massage and the Burleigh Relaxation Bath technique on fathers' symptoms of depression, involvement with the infant, and marital satisfaction. 32 couples were randomly assigned to the treatment group or a control group. Outcomes were measured at 8 weeks post-intervention using the Kansas Marital Satisfaction Scale (Schumm et al., 1986). Treatment group fathers showed higher levels of marital satisfaction compared to controls ($p<.05$). The authors suggest that this is a result of other positive impacts of the intervention on father-infant interaction and depressive symptoms (see other sections of this review), which improved overall family functioning. However, this was a very small sample and further evidence is needed to replicate this finding.

3.1.6.5 Summary of studies with couple relationship outcomes

As can be seen in the harvest plot in Figure 4, 5 of the 13 studies which reported on couple outcomes had no impact, while 8 showed a beneficial effect. While it appears that the majority of the antenatal interventions had a beneficial impact, it should be noted that 3 of these had small sample sizes, while those without impact had greater power to detect effects. Intensity of input does not appear to impact on effectiveness across studies. Only two studies did not have the couple relationship as the primary outcome so it is not

possible to see if this had an impact. Similarly, the majority of studies used a group format, and there is not a clear benefit to this in the plot. None of the studies had a father-only component.

Table 3 provides more information about possible beneficial components. Those studies showing impact were substantially more likely to include an experiential or practical component (most frequently skills around couple communication and problem-solving, but also infant massage), were more likely to include parenting strategies as a topic (for example, including concepts around co-parenting, discussion about parenting styles, and tips about play), and there was a trend towards those interventions which included an opportunity for discussion. However, overall, larger samples are needed, with longer term follow up, in order to replicate some of the positive findings with couple-focused interventions.

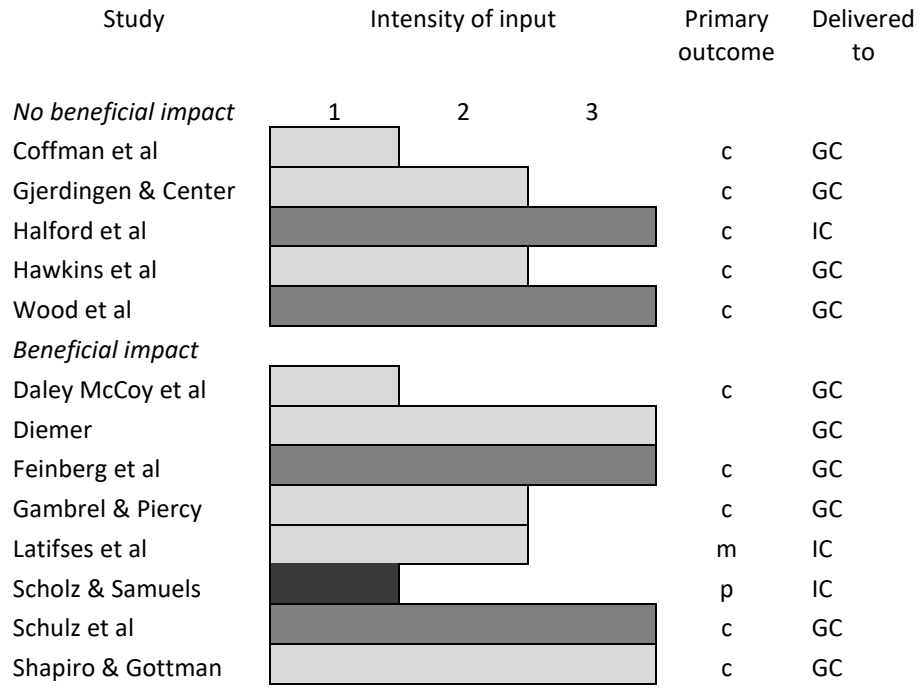


Figure 4 - Harvest plot of intervention components for studies with couple relationship outcomes (n=13)

Key:
Antenatal; Perinatal; Postnatal
Intensity of input: 1 = 1 session; 2 = 2-4 sessions/hours; 3 = >4 sessions/ hours
Primary outcome: m = mental health; c = couple relationship; p = parenting
Delivered to: GC = groups couples; IC = individual couples; GF = group fathers

3.1.7 Parenting outcomes

Eleven studies reported on parenting outcomes. Common delivery formats included discussion (n=7), use of worksheets or handouts (n=7) and experiential or practical tasks (n=7).

3.1.7.1 Antenatal interventions

Three studies, all described in more detail above, involved an additional antenatal session which focused on preparing for parenthood, alongside standard classes. They had mental health (Hauck et al., 2015; Matthey et al., 2004) or couple relationship quality (Coffman et al., 1994) as their primary outcome but included postnatal measures related to parenting and so are described again here with details of their parenting outcomes.

Matthey et al (2004) explored the impact of an additional antenatal session on couples' (n=199) psychosocial adjustment in Australia. Treatment couples attended a session where they were able to discuss postpartum concerns in separate gender groups and then with their partners. Outcomes were measured at 6 weeks and 6 months postpartum, using the Parenting Sense of Competence Scale (PSOC) (Ohan et al., 2000). There were no significant effects of the intervention on parenting sense of competence (*p* values are not reported for these outcomes). The study reported few details about how participants were allocated to groups or any blinding procedures, and also gave little detail about statistical outcomes for men.

Hauck et al (2015) report on a 1-hour father-only class, provided as an add-on to standard classes in Australia, and delivered by a male midwife in the third trimester (n=115). The group aimed to improve depression, anxiety and parenting confidence. The treatment group received a manualised session based on problem-solving and practical skills related to infant care. Outcomes were measured at 6 months postpartum using the self-report Parenting Sense of Competence Scales (PSOC – includes satisfaction and efficacy) (Ohan et al., 2000). There were no differences in parenting satisfaction (p=.875) or parenting efficacy (p=.945) between the groups. However, only around 50% of participants completed outcome measures.

Coffman et al (Coffman et al., 1994) examined the effect of a single-session antenatal group for couples (n=204), designed to clarify expectations of partner support, on new parents' relationship satisfaction, emotional affect and attitude towards the baby. The intervention group attended an additional class on top of standard antenatal classes which involved completing an index of their expectations and then sharing this with their partner. Outcomes were measured at 3 and 6 months postpartum using a measure of attitude towards the baby (developed for this study). There were no significant effects of the intervention on attitudes towards the baby (p values are not provided). The study provides few details about the process of randomisation or the outcomes. The authors suggest that more focus may be needed on motivating couples to put group learning into practice.

These brief antenatal group interventions had no impact on self-reported postnatal parenting outcomes. One further antenatal intervention included a measure of paternal-fetal attachment.

Latifses et al, described in detail above, examined the impact of pregnancy massage and relaxation on fathers' anxiety, the couple relationship and foetal attachment in a US sample. Fathers (n=139) were randomised to the massage group, relaxation training, or a no treatment control group. Outcomes were measured at the end of the intervention period, using the self-report Paternal Fetal Attachment Scale (Weaver & Cranley, 1983). The intervention did not impact on paternal-fetal bonding (p values not reported). The study may have benefited from longer term outcomes to explore if there were any postnatal effects.

From these four studies there is no evidence that antenatal interventions using a one-off session or pregnancy massage can impact on self-reported parenting outcomes across the perinatal period.

3.1.7.2 Perinatal interventions

One perinatal intervention had a specific focus on parenting outcomes. Doherty et al (2006) examined whether an 8-session perinatal group could enhance the quality of the father-infant interaction and increase father involvement in US couples. 132 first-time

parent couples, recruited from obstetric clinics, were randomised into the treatment group (n=65) or a no treatment control (n=67) during the second trimester. Couples in the treatment group received an individual home visit and then seven group sessions – 3 antenatal and 4 postnatal. The curriculum included lectures, discussions, role plays and demonstrations related to the fatherhood role, and was delivered by pairs of male-female instructors. The aim was to enhance fathers' knowledge, skills, and commitment to the fatherhood role; to increase mothers' support and expectations for the fathers' involvement; to foster co-parental teamwork in the couple; and to have the couple deal more constructively with contextual factors such as work and cultural expectations. Outcomes were measured at 6 and 12 months postpartum. Quality of interactions was measured using 5-minute video-taped free play interactions, which were coded using the Parent Behaviour Rating Scale (Erickson & Egeland, 1990). Father involvement was measured using a combination of time diaries and the self-report Parental Responsibility Scale (McBride, 1990). The overall interaction score was significantly higher in the intervention group (p values not reported, but effect size given as .47 and.31 at 6 and 12 months respectively). For father involvement, the intervention showed a significant effect for 'accessibility' on the time diaries (effect size .42 and .30 at 6 and 12 months) but not for any other aspects and there was no effect on the Parental Responsibility Scale. This study was rated as good quality and included observational measures, which is a strength. The authors suggest that there may have been a ceiling effect on some of the involvement measures due to the active engagement of the fathers who chose to take part in the study.

Two further perinatal interventions, both described in detail above, focused on improving the couple relationship but included parenting outcomes.

Feinberg et al investigated the impact of 'Family Foundations', an 8-session universal group programme delivered across the perinatal period and designed to enhance co-parenting in first time parents in the US. Couples (n=152) were randomly assigned to treatment or a no-treatment control. Treatment couples attended 8 interactive, psycho-educational, skills-based group sessions which aim to prepare parents for the strains of the transition to parenthood. At 1 year postpartum, outcomes were measured during a home visit, using 6-minute video-taped interactions of triadic play tasks for couple and father-infant relationship outcomes. Videos were rated using a system developed for this

study, which coded aspects of parenting and dyadic couple interaction on a scale of 1-7. There were significant effects on father-infant interaction at 1 year postpartum with higher positivity and lower negativity shown by the intervention group fathers ($p<.05$). This was a well-conducted study with a detailed intervention manual based on extensive theory.

Wood et al reported on the Building Strong Families, a perinatal group programme providing relationship skills education for low-income, unmarried couples. In this large-scale RCT (n=5,102) couples across eight sites were randomly assigned either to the treatment group or a no-treatment control group. The treatment group received one of three adapted curricula which involved weekly group meetings across a minimum of 6 weeks delivering the core components of BSF. The study used a measure of father involvement that combined father-report and mother-report about time spent with the child. There were no significant impacts on father involvement 15 months after baseline (p values not reported, effect sizes all below 0.07).

These three studies had large sample sizes and included follow up at 12 months postpartum. Two of them showed an impact on interactions and involvement, which is a promising finding. The intervention described by Doherty et al explicitly targets father-infant interactions using demonstrations and role play, while Family Foundations targets the couple relationship and co-parenting. Feinberg suggests that the increased positivity in father-infant interactions that they found is a result of improved co-parenting and couple relationship quality. The intervention described by Doherty also includes components around co-parenting and problem solving as a couple, alongside specific components on knowledge and skills related to infants. Therefore, a focus on the parenting alliance may be an important factor in improving fathers' relationship with their infants. Conversely, Scholz and Samuels suggest that the improvements in marital satisfaction seen in their study may be a result of improved father-infant interactions. It may be that there are bi-directional impacts between the couple relationship, parent-infant relationship and parenting alliance, with improvements in one aspect of family functioning positively impacting other aspects.

3.1.7.3 Postnatal interventions

One study described a hospital-based intervention delivered in the immediate postnatal period. Er-mei et al (2017) reported on the effect of an intervention to increase skin-to-skin contact (SSC) between fathers and their newborns in Taiwan. 83 fathers whose partners gave birth at one hospital were randomised to receive either standard care plus the SSC intervention (n=41), or standard care alone (n=42). The treatment group fathers were given a 15-minute session about SSC once a day for 3 days while in hospital (it is standard practice in Taiwan for mothers to remain in hospital for 3 days after the birth), delivered by a researcher. This involved being supported to perform SSC in a quiet place when their infants were settled, being encouraged to make eye contact and use a soft voice. The control group were shown how to hold and bathe their infant as part of the normal care provided by the hospital. Outcomes were measured at the end of the intervention using the self-report Father-Child Attachment Scale (Yang, 1999). The mean post-test score for self-reported father-child attachment was significantly higher in the intervention group compared to controls ($p<.001$). Support with specific skills immediately after birth seems to be helpful in this study, although outcomes were only measured immediately after the intervention.

Two studies report on interventions using infant massage.

Cullen et al (2000) examined the impact of teaching infant massage on fathers' interactions and involvement with their 3-14-month-old infants. 22 fathers who were recruited from classes at a family centre were randomised to the treatment group or a waitlist control. The treatment group were taught how to massage their infants by a trained therapist and were then instructed to do this for 15 minutes at home before bed over a period of 1 month. They were given a training tape and written instructions to support their learning. The control group continued their normal bedtime routine. Outcomes were measured at the end of the intervention, including a childcare scale created for the study to measure involvement in caregiving activities, and 5-minute video-taped play interactions, coded using an adapted version of the Maternal Behaviour Rating Scale (Mahoney et al., 1986). The intervention group had significantly higher ratings on interactions compared to controls ($p<.001$), and a significantly greater time spent on caregiving ($p<.05$). This was a very brief report, with few details provided about trial

procedures and no follow up measures taken. Additionally, the sample size was very small. Nevertheless, as above, the study provides tentative support for this skills-based intervention.

Scholz and Samuels 1992 (described in detail above) reported a study whose primary outcome was to improve the parent-infant relationship through the use of infant massage. 32 couples were randomly assigned to the treatment group or a control group. Treatment families were visited at 4 weeks postpartum and given a demonstration of infant massage and the Burleigh Relaxation Bath technique with an opportunity to practice themselves and a brochure to keep. Outcomes were measured at 8 weeks post-intervention and included a time diary and a 10-minute father-infant observation coded for examples of positive social interaction, positive physical contact and caregiving. Treatment group fathers bathed and massaged their infants significantly more than control group fathers ($p<.05$); they showed more positive interaction behaviours towards their infants ($p<.0001$) and their infants showed more positive behaviours towards them ($p<.0001$). However, this was a very small sample and further evidence is needed to replicate this finding.

All three of these postnatal interventions use a skills-based approach to support father-infant relationships and indicate positive impacts on interactions and involvement. However, all of them had small sample sizes and two studies had no follow-up measures. This therefore needs to be tested in larger samples.

Finally, one study used video modelling as an intervention. Magill-Evans et al (2007) explored the impact of a home-based video-modelling intervention on first-time fathers' interactions with their infants and their parenting sense of competence. 162 fathers, recruited from prenatal classes, routine health centre visits, and adverts in community settings, were randomised to a treatment group (n=89) or control (n=94) when their infants were around 5 months old. Treatment fathers received two 1-hour home visits at 5 and 6 months postpartum, delivered by home visitors who had been trained by the research team. During the visits, fathers were video-taped playing with their infant and they then reviewed the tape with the home visitor, highlighting examples of when they displayed parental sensitivity and responsiveness with their infant. They also received a handout and a copy of the videotape. Control fathers received similar home visits at which

they discussed age-appropriate toys with the home visitor. Outcomes were measured at 8 months postpartum during a home visit, using an observation measure - the Nursing Child Assessment Teaching Scale (NCATS) (Sumner & Speitz, 1994) - to measure parent-child interaction, and the self-report Parenting Sense of Competence (PSOC) scale. Fathers in the intervention group had significantly higher scores for their interactions than the control group (p=.001); there was no difference in parenting sense of competence between the groups (p value not reported). The authors note that fathers who volunteered for the study may have already felt confident with their parenting, thus finding no differences between the groups for this self-report measure. This study was rated as good quality, with a large sample, and outcomes measured at 8 months postpartum. Again, learning specific practical skill appears to be a useful intervention for improving interactions and involvement.

Most studies are not able to show impacts on self-report measures of parenting, while more success is demonstrated with behavioural outcomes of interaction and involvement. As Magill Evans notes, it may be that fathers who choose to take part are already confident in their parenting.

3.1.7.4 Summary of studies with parenting outcomes

As can be seen in the harvest plot (Figure 5), out of the 11 studies that included parenting outcomes, 6 showed a beneficial impact while 5 did not. Those that had a positive impact included all four postnatal interventions in this group, while all four of the antenatal interventions showed no effect. This suggests that timing may be important when focusing on parenting variables. However, several of the antenatal interventions were very brief, and so it may be that low-intensity interventions delivered before the baby has arrived are not sufficient to impact on these longer-term outcomes. Additionally, three of the postnatal interventions had small samples which were too small to detect effects, and so these need to be tested on larger samples. This is also the case for individual versus group interventions – the plot shows a trend towards individual postnatal interventions being beneficial, with three of the six beneficial interventions being delivered to individual fathers. But the small sample sizes mean this should be interpreted with caution.

All the interventions which had parenting variables as their primary outcome showed positive effects, perhaps indicating that this is a good candidate as a modifiable variable. In particular, the parenting aspects which improved were more likely to be specific behaviours i.e. interactions and levels of involvement, rather than self-reported feelings of competence, efficacy or satisfaction. As some authors noted, this may be due to self-selecting samples already feeling confident in their parenting.

Interventions did not strongly favour any particular content – four out of the eleven studies included problem-solving, couple communication, managing expectations and infant care. Table 3 indicates that a practical focus and the use of demonstrations or videos may be particularly beneficial for parenting outcomes, with the explicit inclusion of parenting strategies also appearing to be beneficial.

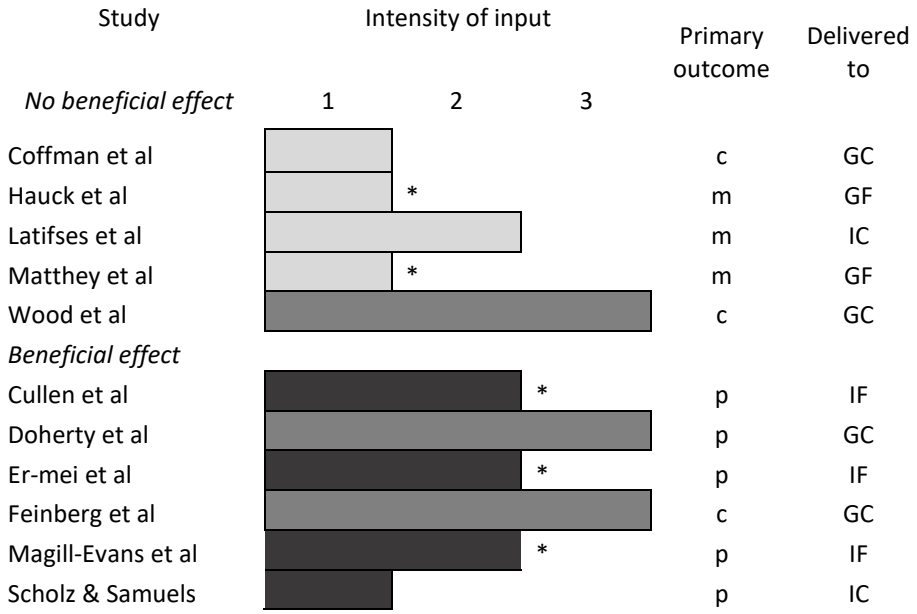


Figure 5 - Harvest plot of intervention components for studies with parenting outcomes (n=12)

Key:
Antenatal; Perinatal; Postnatal
Intensity of input: 1 = 1 session; 2 = 2-4 sessions/hours; 3 = >4 sessions/ hours
Primary outcome: m = mental health; c = couple relationship; p = parenting
Delivered to: GC = groups couples; IC = individual couples; GF = group fathers
* Father only component

3.2 Discussion

This review aimed to summarise the content, format and impact of interventions which target paternal perinatal distress, the couple relationship or parenting outcomes, and to

identify the components of interventions which are beneficial in improving these outcomes. As part of the wider thesis, the objective was to identify intervention components which would be helpful in supporting fathers with mental health needs to overcome their symptoms and improve their relationships.

Out of the 34 studies included in this review, there was wide variation, both in terms of the content used to target specific outcomes and also in the format of delivery. There was also substantial variation in methodological quality, with some studies, for example, providing few details about their procedures, reporting on effectiveness despite under-powered designs, or not using random allocation to groups. Importantly, the majority of interventions targeted universal populations, with only four targeting parents with specific risk factors (e.g. infants with sleep difficulties, low SES fathers, and unmarried couples) and none targeting fathers with identified mental health needs. This is a significant limitation of the review, making it challenging to draw conclusions about what may be helpful for this population. Nevertheless, some useful learning can be derived from the studies included here.

The discussion will highlight the key results and themes from included studies. First, the timing and overall format of the interventions will be considered, followed by a summary of the specific delivery formats and content topics that were associated with impacts on the 3 different outcomes. Strengths and limitations of the included studies and of the review will then be discussed, and finally implications of the findings will be summarised.

3.2.1 Timing and format

Antenatal groups delivered to couples were the most common format for interventions, with 13 out of 34 studies using this mode of delivery. Pregnancy is a time when parents are preparing for changes, potentially looking for support and information, and are likely to be in touch with health services for other reasons e.g. for scans, screening etc. Therefore, it may be an opportune time to deliver additional content aimed at improving family outcomes (May & Fletcher, 2013).

However, practitioners note the challenges with engaging fathers in the antenatal period as groups are often delivered during working hours, by female health professionals, and

may be perceived by families as targeted at women (Darwin et al., 2020). Several studies in this review recruited fathers who were already registered to attend antenatal classes, representing a self-selecting sample of men who were willing and able to engage with the process of the transition to becoming a father. Indeed, authors noted that their samples may not be representative of the wider population of fathers (e.g. Li et al., 2009). Furthermore, there was little evidence of antenatal groups which prepared parents for childbirth or for parenthood impacting on postnatal mental health or on parenting outcomes. It may be that expectant parents are more focused on labor and birth during pregnancy and therefore this is not the time when they are receptive to information about the baby (Fletcher, Silberberg, & Galloway, 2004). There was some evidence that antenatal groups which targeted the couple relationship may impact on mental health and the couple relationship. But as these studies tended to be underpowered and they did not always measure impacts beyond the end of the intervention, this should be interpreted with caution.

Interventions which began in pregnancy but continued into the postnatal period also showed mixed outcomes. There was little evidence of impact on mental health outcomes, but some positive impacts on the couple relationships and father-infant interactions. The perinatal groups tended to be more intensive as they provided sessions and input over a longer time period. Therefore, this may have been a factor in improved outcomes (Hawkins et al., 2008). However, there was not a clear advantage to longer interventions across the studies in this review. Therefore, it may be that the important feature is having a postnatal component to ensure that fathers continue to put into practice the things they have learned once the baby has arrived (Halford et al., 2010).

The postnatal interventions tended to be delivered to individual couples or fathers and were more likely to focus on parenting outcomes. It may be more challenging to deliver group interventions at this time as parents are trying to adjust to new routines and lack of sleep. Therefore, most of the postnatal interventions used alternative formats such as home visits, phone calls, or working with parents on postnatal wards. These interventions tended to show beneficial impacts on behavioural parenting outcomes such as interactions and involvement, perhaps because they focused on more tangible or practical skills such as infant massage, skin to skin contact, or video modelling of sensitive interactions. The

Rominov (2016) systematic review of this literature suggests that tangible skills may be important for new fathers to feel useful and valued, especially in the perinatal period when uncertainty about the fathering role and a lack of knowledge about infant development may cause stress (Baldwin et al., 2018).

Twenty three of the 34 studies used a group format. Group interventions have the advantage that parents-to-be can gain social support and learn from their peers, which some authors highlighted as an important mechanism of change (Feinberg et al., 2010; Wood et al., 2014). Indeed, peer support is increasingly being implemented across perinatal settings, with a recent report from Mind and the McPin Foundation describing key principles of peer support for families affected by perinatal mental health problems (2019). This may be particularly important for new fathers, who may otherwise lose friendships and connections across the transition to parenthood (Movember, 2019). Other studies used home visits, telephone and internet support, videos and written information as a way to deliver interventions, with several studies using mixed formats to deliver content and reinforce key messages through different mediums (e.g. Hawkins et al., 2008; Scholz & Samuels, 1992). Individual formats were more likely to be used for postnatal interventions.

For those studies included in the synthesis (i.e. those rated as moderate or good quality), there was not a clear advantage to the group format, with this being present amongst both beneficial and non-beneficial interventions, across all outcomes. Instead, the delivery format most commonly associated with beneficial outcomes was an experiential or practical element to the intervention. As noted above, this has been identified as helpful for fathers in the wider literature. Furthermore, studies about therapeutic interventions for men also suggest that a practical focus is preferred and may improve engagement (Spendelow, 2015b). For couple relationship outcomes, the use of discussion also seemed to be important, while demonstrations and videos were associated with improved parenting outcomes.

Only one of the studies included in this review used an online format (Salonen et al., 2011) (this study was not included in the synthesis due to being rated as poor quality). Despite this, several recent reviews have recommended that web-based interventions should be developed for fathers to improve accessibility and

engagement (Pilkington, Whelan, et al., 2015; Rominov et al., 2016; Wong et al., 2016). Web-based formats have several advantages, including reaching a wider cohort of fathers, reducing the burden on health professionals, and, when used for those with mental health needs, may reduce the stigma associated with accessing mental health services (Cuijpers, van Straten, Warmerdam, & van Rooy, 2010; Fletcher, Vimpani, Russell, & Keatinge, 2008; StGeorge & Fletcher, 2011). Several studies have recently used digital interventions to improve paternal engagement and partner support in non-clinical populations suggesting that this could be an effective way to engage and support fathers with PPND (Pilkington, Rominov, Milne, Giallo, & Whelan, 2017). The disadvantage here is not having the social support element. However, the Finnish study included in this review which used an online intervention incorporated a peer discussion forum to overcome this (Salonen et al., 2011). Furthermore, several recent pilot studies of father-inclusive perinatal interventions, which did not meet the criteria for this review due to not reporting effectiveness, have used digital formats, including SMS, websites and apps (Fletcher et al., 2017; Pilkington et al., 2017).

3.2.2 Mental health

A key result from the review is that there were no studies targeting fathers with identified mental health problems. Therefore, while results are rather mixed in relation to the impact on mental health outcomes, this may simply be due to the fact that the samples did not have difficulties to begin with.

Of note is that some of the group interventions which primarily targeted the couple relationship had positive impacts on mental health outcomes (e.g. Daley-McCoy et al., 2015; Gambrel & Piercy, 2015a). A key factor noted by some authors seems to be the social support provided by group formats (Gambrel & Piercy, 2015a; Wood et al., 2014), which, as noted above, has been identified as important in mental health. Similarly, there are strong associations between the quality of the couple relationship and perinatal mental health for both mothers and fathers (Giallo et al., 2013; Howard et al., 2014). Therefore, targeting the couple relationship may be a useful way to protect parents' mental health during the transition to parenthood. However, several of these studies had small sample sizes that were under-powered, and other couple-focused group interventions did not show such impacts, therefore caution is needed in interpreting these results.

Antenatal massage interventions showed positive impacts on mental health during pregnancy, but it is unknown if they had an impact on postnatal mental health as longer-term follow-up was not included in these studies. Similarly, postnatal infant massage was also beneficial, although larger samples are needed to replicate this result. More broadly, it appeared that an experiential or practical element to the intervention was beneficial, with 6 out of the 10 interventions that reported including a skills-based component having a positive impact on mental health outcomes.

3.2.3 Couple relationship

The couple relationship is an important target for interventions aiming to prevent or treat paternal perinatal depression as there are bi-directional associations between these variables (Giallo et al., 2013; Ramchandani et al., 2011). Additionally, there is evidence that relationship quality declines across the transition to parenthood, and so an explicit focus on this may help to protect relationship quality and prevent one the risk factors for poor mental health (M. S. Schulz et al., 2006). Therefore, this review aimed to explore intervention components which impact on relationship quality.

Overall, the evidence for antenatal groups impacting on postnatal relationship quality was mixed, with those studies with small sample sizes tending to show more effects than fully powered designs. As noted above, it may be that parents are focused on the birth during the antenatal period and potentially less receptive to information about postnatal factors. Indeed, authors noted that additional follow-up sessions may be needed to impact on outcomes (Halford et al., 2010).

Perinatal groups tended to be more intensive and go over a longer time period, perhaps overcoming some of the limitations of briefer antenatal group-based interventions. However, the four studies reporting on perinatal interventions aimed at enhancing the couple relationship also had mixed outcomes. As with the studies targeting mental health outcomes, most of the interventions targeting the couple relationship were universal, and so the lack of impact and mixed outcomes may be due to couples not requiring support for their relationship (Hawkins et al., 2008). However, one study showed no beneficial impacts despite targeting at-risk families (Wood et al., 2014).

Hawkins et al (Hawkins et al., 2008) note the need for interventions which include practical skills training as well as information in order to make a difference to couple behaviours. The only postnatal intervention which measured couple outcomes was an infant massage intervention, which reported beneficial impacts on marital satisfaction (Scholz & Samuels, 1992). The authors suggest that this is a result of other positive impacts of the intervention on father-infant interaction and depressive symptoms, which improved overall family functioning. However, this was a very small sample and further evidence is needed to replicate this finding. More broadly, there was evidence that interventions which included a practical or experiential component (for example, skills around couple communication and problem-solving, but also infant massage) and included an element of discussion were beneficial for couple outcomes. A focus on parenting strategies also appeared to be helpful, for example, including concepts around co-parenting, discussion about parenting styles, and tips about play. Feinberg et al specifically focus on the co-parenting relationship in Family Foundations, based on the idea that building support and collaboration will enhance the couple relationship as well as improving parenting. Indeed, this was a promising intervention for both couple and parenting outcomes. However, this intervention did not impact on mental health outcomes, although it is yet to be tested on samples with identified mental health needs.

Indeed, as above, due to the fact that none of the samples in this review had identified mental health needs, it remains unknown whether any beneficial impacts would remain if the interventions were delivered to clinical samples.

3.2.4 Parenting

The relationship with the baby and men's thoughts and beliefs around fatherhood are also associated with paternal perinatal depression. Therefore, the review aimed to explore intervention components which may impact positively on these outcomes.

Based on the studies in this review, antenatal interventions may not be the best way to improve parenting outcomes. As noted above, one explanation may be that expectant parents are more focused on labor and birth during pregnancy, or perhaps that some of these interventions were not of sufficient intensity to impact on outcomes postnatally (e.g. single session groups) (Coffman et al., 1994; Hauck et al., 2015).

In contrast, perinatal interventions and postnatal interventions were more beneficial. Two perinatal groups showed positive impacts on father-infant interactions and paternal involvement (Doherty et al., 2006; Feinberg & Kan, 2008). These were both quite intensive, 8 session groups, and despite each having a different focus (co-parenting and father-infant relationship), they both included components which focused on the couple relationship and co-parenting as well as specific parenting strategies. They also both used multiple delivery formats, including a practical, skills-based element. These authors discussed different pathways to positive family outcomes, noting the bi-directional nature of many associations between family variables, and therefore how targeting one aspect of family functioning (e.g. co-parenting) could impact on several others (e.g. couple relationship, father-infant relationship).

The postnatal interventions, as noted above, also tended to be more skills-based and, again this seems to be helpful for particular parenting outcomes. It seems that these interventions can impact on behavioural outcomes such as father-infant interactions and paternal involvement with the baby, but less so on beliefs or feelings about parenting e.g. sense of competence, satisfaction etc. However, some authors noted that their self-selecting participants may already have been confident in their parenting and they may have reached ceiling effects on some of the self-report measures (Doherty et al., 2006; Magill-Evans et al., 2007). Once again, it is important to note that these were nearly exclusively universal samples and therefore it is difficult to know if the same impacts would have been seen in fathers with symptoms of depression or anxiety, where parenting self-efficacy and sense of competence may be low at baseline.

Many of the samples were primiparous fathers and so interventions providing knowledge and skills about babies would have been helpful in increasing understanding. Indeed, many fathers report wanting more information about infant development and bonding, citing lack of knowledge as a barrier to being more involved with their babies (Baldwin et al., 2018). As has been the case throughout this review, there was a trend towards skills-based, practical interventions being most beneficial e.g. infant massage, video-modelling, and practical demonstrations, once again highlighting the need for more skills-based interventions when working with men, with a focus on tangible behaviours and a strengths-based approach (Domoney, Trevillion, & Challacombe, 2020).

3.2.5 Recruiting and engaging fathers

The studies in this review used a range of strategies to engage fathers and gather outcomes, including promoting the study on local radio and online, as well as using flyers and posters (Doherty et al., 2006; Gambrel & Piercy, 2015a), providing childcare, transport and cash incentives (Wood et al., 2014), and using brief questionnaires in multiple formats, with regular reminder emails (Hauck et al., 2015; Tohotoa et al., 2012). Some noted that postnatal follow up, especially in the early weeks, was very challenging, as parents may be overwhelmed and adjusting to the new role (Hauck et al., 2015; Wood et al., 2014). Panterbrick and colleagues (Panter-Brick et al., 2014) note the importance of actively engaging with fathers and co-parents in order to encourage participation in interventions for parents, citing a range of biases which can impact this e.g. cultural, institutional, professional and content biases. They go on to provide recommendations for practitioners and researchers to overcome this. For example, considering the timing, location and medium of delivery, ensuring facilitators are trained to work with co-parents in gender-specific ways, ensuring follow up of non-attendance, and making sure that materials and activities are inclusive. For research, they also note the importance of active recruitment of fathers, disaggregating outcomes by gender, and ensuring a range of outcomes across different domains to adequately capture impacts.

Further challenges may arise in research studies due to self-selection bias of the fathers who choose to participate and provide follow up data. Indeed, several studies recruited from samples of fathers who were attending antenatal classes with their partners, and some authors indicating reaching ceiling effects on some of their outcomes due to the committed and active characteristics of the fathers in their sample (Doherty et al., 2006; Matthey et al., 2004). This highlights the importance of considering recruitment strategies early in the planning stages of studies of fathers and the need to actively target those with risk factors and those who may not typically engage in such research.

3.2.6 Limitations of included studies

There was little diversity in the samples in the included studies, meaning it is hard to say what the impact of these interventions would be on more culturally diverse populations. Some studies with little ethnic diversity stated that this was representative of their local

populations (Halford et al., 2010; Hawkins et al., 2008). It will be important for future studies to include fathers from a wider range of backgrounds, including different ethnicity, different levels of education, and different socio-economic status. While recruitment can be challenging, Panterbrick et al, 2014, cited above, provides suggestions for ensuring better recruitment of fathers in general into parenting interventions, and more mixed samples in particular.

Included studies were mixed in terms of their quality and the risk of bias. Furthermore, several well-designed studies had low sample sizes which were under powered to detect effects. Therefore, while their quality rating may have been reasonable, results showing impacts should be interpreted with caution. In some studies, this was linked with difficulties in recruitment i.e. the intended sample size, which would have been sufficient to detect effects, was not achieved (e.g. Cheng et al; Salonen et al 2011). Several studies did not include follow up beyond the end of the intervention, making it difficult to know if any effects persisted over time. This is important as some studies with follow up showed an attenuation of effects from the end of the intervention to follow up (Halford et al., 2010). Studies often omitted details about group allocation, blinding procedures, characteristics of control and treatment fathers, and statistical summaries of outcomes. This hindered the ability to judge the risk of bias accurately and also made it challenging to follow the process of analysis or interpret the results meaningfully.

There was wide variation in the level of detail provided about the intervention. Some studies reported extensive details, including underlying theory, while others reported very little. This variation in the level of description provided in the papers meant that creating accurate categories to capture the delivery formats and content topics was sometimes challenging. For example, some interventions did not clearly describe the way that content was delivered.

The variety of instruments used to measure outcomes across the studies and the range of follow-up time points also made it hard to compare the impact of the interventions. For example, the studies using mental health outcomes included measures of symptoms of depression, anxiety, distress, mood, and parenting stress. While this indicates some recognition of the fact that perinatal mental health difficulties go beyond depression

(REF), it nevertheless makes it challenging to compare the effect of different interventions.

3.2.7 Limitations of this review

The review only included peer reviewed literature. It is likely that practitioners are indeed working with targeted groups of fathers and developing ways to improve mental health. However, this work has not been published and so was not included here. While one option is to include grey literature, this creates extra challenges in terms of the quality of studies and having sufficient information about the study. Furthermore, this would have required additional resources which were not available. The review also did not include non-English studies due to a lack of resources. However, only one study was excluded on this basis.

As noted above, there was substantial heterogeneity amongst the included studies. The net was deliberately cast wide in terms of outcomes and intervention type so that maximum learning could be gained about useful components of interventions for fathers. However, this meant that there was wide variation in terms of design, type of outcome measures (self-report, observational), population (universal or targeted), and intensity of the intervention. This made it challenging to draw out learning from the studies as there were a large number of potential moderator variables and variations in the extent to which they were described.

Similarly, the heterogeneity meant that the review used vote counting based on direction of effect as a synthesis method. This strategy provides no information on the magnitude of effects and does not account for differences in the relative sizes of the studies (Borenstein, Hedges, Higgins, & Rothstein, 2009). Nevertheless, it is an established method for synthesising such varied literature and was useful for providing overall summaries of intervention components which may be beneficial.

3.3 Implications

Due to the lack of data on outcomes for men with identified mental health difficulties, the implications for an intervention for paternal depression are somewhat limited. However, there is some useful learning:

3.3.1 Format

- The most prominent outcome of this review was the value of a practical, skills-based approach within interventions. This was highlighted across all three outcomes. This could cover a wide range of features, from practicing communication skills with the partner, to modelling father-infant interactions to learning massage techniques. The opportunity to put things into practice and create tangible learning outcomes seemed to be important.
- There was also evidence of the need for a postnatal component in order to impact on outcomes. Learning during the antenatal period may not transfer to the postpartum without continued input.
- Several authors discussed the importance of having a group to provide a social component for peer support. There was not clear evidence of this from the review, but it was noted by several authors and chimes with other literature, including qualitative studies with fathers.

3.3.2 Content

Specific content was more difficult to glean due the wide variation in the included studies.

- A focus on parenting strategies was beneficial for couple and parenting outcomes, including, for example, concepts around co-parenting, discussion about parenting styles, and tips about play.
- Groups with a relationship focus also had some impacts on couple and parenting outcomes.

3.3.3 Measuring outcomes

- It may be important to capture broad mental health symptoms when working with fathers. For example, some studies saw impacts on anxiety but not depression. Capturing other outcomes, including relationship and parenting variables, can also help to give a picture of potential mechanisms and further impacts, allowing a more nuanced understanding of the way that family variables influence each other.
- Studies in this review highlighted the need for longer term follow up beyond the end of the intervention. There was variation in scores over time with some studies noting an attenuation of positive effects (Halford et al., 2010) while others saw

improvements in poor immediate outcomes at a later time point (Shapiro et al., 2011).

3.3.4 Targeting those with risk factors

- A clear outcome of the review was the need to actively target fathers with risk factors for poor mental health. New guidelines in England mean that there will be mechanisms in place to identify fathers with symptoms of depression. A remaining challenge is to support men to overcome barriers to engagement and take up offers of support.

3.4 Conclusion

This review sought to draw together literature on the format, components and impacts of a range of interventions for fathers in the perinatal period in order to summarise key learnings for both prevention and reduction of distress. A key finding was that there are no existing interventions which target fathers with identified mental health needs. Despite this, there was some useful learning about components which may impact on the three outcomes – a practical, skills-based focus was found to be important, alongside beneficial effects of including a postnatal component and having a focus on parenting strategies.

In light of the paucity of research on fathers with mental health needs, interventions need to be developed which can fill this gap. This requires further information about the needs of expectant fathers with risk factors for mental health disorders and with current symptoms. Additionally, the particular targets, mechanisms and techniques which are most relevant to men in the perinatal period and the most useful components and formats need to be identified in order to develop effective interventions.

The next two studies in this thesis are designed to draw together this data from other sources. Specifically, study 2 reviews existing qualitative data on fathers' mental health needs and adds to this data through interviews with men with multiple risk factors for poor perinatal mental health; study 3 surveys experts in the area of paternal mental health to elucidate the specific topics and content which may be most beneficial in supporting fathers.

CHAPTER 4 – BECOMING A FATHER IN THE CONTEXT OF INTIMATE PARTNER VIOLENCE: A QUALITATIVE STUDY. INTRODUCTION AND METHODS.

4.1 Introduction

This chapter presents an overview of the qualitative literature around fathers' mental health, as well as the background, rationale and methods for Study 2 – a qualitative interview study with fathers who are violent in the perinatal period.

While Chapter 1 of this thesis sets out much of the background literature around fathers' mental health, including prevalence, risk factors, and impacts of paternal depression, this chapter focuses specifically on qualitative research on men's transition to parenthood in the context of mental health difficulties, drawing out key learning for the purposes of intervention development. It also brings in learning from the qualitative literature on men's mental health more generally, noting helpful concepts that can inform work with fathers. Following this, I explain the rationale for undertaking interviews with fathers who are violent and describe the literature around fathering and perpetration of violence. I then give an overview of *For Baby's Sake,* a perinatal programme for reducing violence, which provides the context within which study 2 was undertaken. The theoretical approach to the study is described at the end of the introduction, and then a detailed description of the methods is provided.

4.1.1 Qualitative data on men's transition to parenthood

The qualitative data on fathers' experiences in the perinatal period, including those with mental health needs and those whose partners have mental health difficulties, has been well described in meta-syntheses and individual studies and provides useful learning about the components and approach of a perinatal intervention for fathers. This data is therefore summarised here.

To identify key studies, a small scoping review was undertaken in September 2020, searching for qualitative literature related to men's transition to parenthood and men's mental health, with a priority on recent meta-syntheses which summarised several studies. This involved searching Google Scholar using terms related to fathers and mental health and scanning the reference lists of recent studies.

4.1.1.1 Studies on fathers' mental health

Baldwin et al (Baldwin et al., 2018) undertook a qualitative systematic review to identify and synthesize evidence on first time fathers' experiences and needs in relation to their mental health and wellbeing during their transition to fatherhood. Across twenty-two papers, studies included 351 fathers from high income countries. The review identified three main factors impacting on wellbeing: the formation of the fatherhood identity, competing challenges of the new fatherhood role, and negative feelings and fears relating to it.

In terms of fatherhood identity, the review noted that having a child could make fathers feel 'more of a man' and gave them an expanded vision of the future, contemplating new priorities and responsibilities. Fathers tended to associate good fathering with providing for their child, but also worried about 'not getting it right'. They felt some pressure to meet expectations of being both a father and a man, especially given that, for the studies in this review, they were first time parents who were navigating new territory. The review also highlighted the competing challenges that men face across personal and work-related contexts, feeling pressure to meet the emotional and relational needs of the family as well as dealing with social and economic pressures. This led to worries about missing out and not being able to meet all the new demands. Studies with low-income fathers have noted that this might particularly be the case where the family does not have financial stability and the father questions his ability to financially provide for the new baby (J. Y. Lee, 2019).

In relation to negative feelings and fears, there were a range of issues that were identified in the review. A deterioration in the relationship with the partner following the birth was a key issue, with stress due to lack of sleep and emotional exhaustion impacting negatively on the relationship. This is a well-known phenomenon (Cowan & Cowan,

2000) with couples often reporting poor communication, deterioration in their sexual relationship, and a lack of mutual support following the birth.

The relationship with the baby was also a trigger for stress and worry. During pregnancy, men described struggling to bond with the unborn baby, not knowing what to expect of their role, and feeling unprepared. This could lead to feeling helpless and excluded. This is in addition to fears about the birth and anxiety over the safety of their partner and baby, which was exacerbated by a lack of knowledge. This mixture of not knowing and feeling incompetent increased symptoms of depression and anxiety during pregnancy, with these symptoms being key predictors of postnatal mental health difficulties.

A recent study by Tolman and Walsh (Tolman & Walsh, 2020) also highlighted pregnancy as a key time when fears and worries can come up for fathers and, therefore, as an opportunity for engagement. They interviewed 45 fathers in North America just after the ultrasound scan (around 20 weeks gestation) with the aim of finding out how expectant first-time fathers might be motivated to make changes in preparation for fatherhood. Without explicitly being asked, fathers brought up a range of traumas and experiences from their own pasts, including poor experiences of being parented and previous perinatal losses, highlighting the complexity of this moment of transition in their lives. Tolman and Walsh note the ground-breaking work by Selma Fraiberg in the 1970s (Fraiberg & Shapiro, 1975), where the phrase ‘ghosts in the nursery’ is used to describe the impact of parents’ own difficult pasts on their present day parenting. The salience of men’s memories and feelings after the ultrasound appeared to motivate them to reflect on their experiences and led to commitments to make changes in their health, relationships and work-life balance in order to protect their own children from the challenges they themselves had suffered.

Social support and connections are important during pregnancy in order to learn about fatherhood and share experiences. Backstrom et al (Bäckström, Larsson, & Thorstensson, 2020) interviewed 14 first-time Swedish fathers to explore how they use their social networks to prepare for parenting. They describe the value of social support for expectant fathers, especially from other parents, as a way to support men to feel more prepared, have more realistic expectations, and normalise worries or concerns. The opportunity to

meet other expectant parents as well as experienced parents, was highlighted as an important part of the preparation for parenthood.

These studies highlight that pregnancy is a key time to intervene to support fathers. It is a time when men are reflecting on their own experiences of being parented as well as looking to the future. They may also experience considerable worry and stress related to the transition to parenthood. They are already aware of a lack of support and concerned about the impact of this. Tolman and Walsh suggest that facilitating recognition of these 'ghosts in the nursery' may be helpful in developing the bond between the father and foetus and in supporting men to consider ways that they can reduce the influence of these experiences in their own parenting. Providing opportunities to connect with other parents is also needed (Backstrom et al., 2020).

In the postnatal period, the studies in Baldwin et al's review highlighted how men often felt excluded from the relationship both with their partner and their baby and struggled to find a role. This, in addition to changes in lifestyle, led to stress, irritability and frustration. Common techniques for managing these stresses were distraction e.g. spending more time at work, sports, and listening to music, and denial e.g. not sharing their concerns, and not believing their worries are important. This could sometimes lead to further unhelpful behaviours such as gambling and drinking, as well as negatively impacting on the couple relationship. Fathers noted how useful it would have been to be given information about some of these challenges before the birth so that they could better prepare. This included both practical guidance about feeding, crying and routines, and also guidance about relationships with their partner and baby. The review also noted the importance of social support as a protective factor against stress, and the negative impact of exclusion by health professionals.

Recent qualitative studies with men with symptoms of perinatal depression also highlight the problems with help-seeking behaviours. Dye et al (2020) interviewed 21 fathers in the US and Canada who had symptoms of paternal perinatal depression. The study particularly focused on issues around help-seeking, noting that masculine stereotypes led to self-stigma and shame which inhibited help-seeking; expectations that they had to provide for their partners led them to minimise their own needs; and the female partner's response to paternal depressive symptoms could also influence whether fathers sought

help, for example, whether the partner's response tended to confirm or challenge stigma. It also noted how many fathers did not recognise their experience as depression, which hindered help-seeking. Pirmohamed (Pirmohamed, 2020) surveyed over 600 fathers in Canada, around 20% of who reported being diagnosed with depression or anxiety, to explore experiences of and preferences for help-seeking in the perinatal period. Similar to above, these fathers noted stigma as a key barrier to seeking support. In addition, fathers reported that treatment taking up too much time and being inconvenient were also barriers, as well as the fact that they did not prioritise their mental health over other commitments (e.g. work), and were unsure where they would go to receive help. In contrast, they noted that perceived negative impacts of their mental health of their baby and on their partner were motivations for seeking help.

In relation to receiving support and finding ways to overcome symptoms, Dye (2020) highlighted the importance of validation and normalisation of fathers' experiences, as well as needing to feel that they were important in their child and partner's lives and that there was a 'team effort' in overcoming challenges.

The studies described above highlight a range of issues that are important to take into account when intervening with fathers. Learning can also be gained from studies which have explored the experience of men whose partners have mental health needs in the perinatal period (as outlined below). These men may be particularly at risk of developing depression due to the increased stress and demands of supporting an unwell partner.

4.1.1.2 Studies of fathers that have a partner with mental health problems

Lever Taylor et al (Lever Taylor, Billings, Morant, & Johnson, 2018) explored men's views about the perinatal mental health care that their female partners received. In a meta-synthesis of twenty studies, including 243 individuals from high-income countries, the majority of whom were male partners, several themes were identified. Key themes in relation to men's wellbeing were that men felt excluded by services, that their own needs were overlooked or dismissed and that any support available was not extended to them. They did not feel able to raise the topic of their own struggles and found it hard to find information about mental health, either the mother's or their own. They were keen to have information specifically targeted at fathers, including about common concerns,

acknowledgement of their role, and how to access help. At the same time, fathers reported finding it hard to identify their own needs, and often minimised their difficulties whilst prioritising the mother. The review noted how study authors sometimes reinforced this, stating how services were designed for mothers as they were the priority. As noted by Dye above, it seems that men's needs are often not validated by those around them, including both family members and also health professionals and, therefore, they remain unacknowledged and unmet. Similarly, the theme of self-stigma and shame around asking for help was noted, especially in the context of maternal mental health difficulties. In relation to support for fathers when their female partners are accessing services, key ideas were around support that is specific to fathers (i.e. not couples), and potentially resources that are online. There was some ambivalence around group-based support due to possible feelings of discomfort in relation to sharing personal information and feelings with others.

Atkinson et al (Atkinson, Smith, Carroll, Sheaf, & Higgins, 2020) similarly reviewed evidence from qualitative studies of men whose partners had postnatal mental health difficulties, with a focus on their experience and perceptions. They reviewed twenty-five studies, which included 270 fathers from high-income countries. Key issues in relation to paternal wellbeing were the increase in feelings of isolation and loneliness, along with frustration, anger and powerlessness. This was experienced particularly in relation to feeling unable to control what was happening, helpless as to what they should do, and being confused about why the mother was unwell. Maternal mental health disorders also impacted on the fathers' health, including lack of sleep, poor self-care and eating less healthily. The review noted the possibility of fathers experiencing symptoms of depression, although few details were provided.

Key themes from these studies:

- Relationship changes and concerns in the transition to parenthood which are distressing, confusing and lead to lack of support for each other. This is particularly the case where mothers have mental health difficulties.
- Uncertainty about their role, both as a partner and a father, feeling unprepared for the new role and unsure how to balance the different demands it brings. The need to feel useful and needed is key here.

- The influence of masculine norms on expectations about coping, providing for the family, and seeking support.
- Pregnancy as a key time to intervene to support fathers. During the antenatal period, concerns and fears are already beginning to arise, including memories of past experiences which may impact on parenting. Men are motivated to think about making changes which will protect and support their child, and are often seeking information at this stage.
- The importance of information about the transition to parenthood and an opportunity to prepare. Lack of knowledge can increase stress and exacerbate feelings of exclusion.
- The value of social support, especially from other parents, to provide realistic advice and share experiences in order to prepare for the transition to parenthood.
- There are several challenges with identification and support of fathers' mental health needs. This is due partly to an inability of men to recognise their own needs, but also self-stigma and shame due to masculine stereotypes which inhibits help-seeking. Fathers may also feel that they do not have the time for treatment and that it is not convenient. This is exacerbated by exclusion from services, who do not seek to identify fathers' needs, and also potentially by stigma from partners and services who reinforce the idea that fathers' mental health needs are not the priority.
- Validating and normalising some of the challenges of the perinatal period is likely to be important.
- Highlighting the potential impact of poor parental mental health on the baby could motivate men to focus on their own wellbeing and increase help-seeking.

4.1.1.3 Men's mental health outside of the parenting period

Qualitative studies have also explored the experiences of men with depression outside of the perinatal period, identifying experiences related to being male. These are also relevant to intervention efforts for fathers as they highlight the specific challenges that men face in acknowledging and managing distress, and how masculine stereotypes and norms influence the experience of depression.

Several studies have looked at coping mechanisms and strategies that men use to prevent and manage depression. A meta-synthesis of 14 studies, with 323 participants from high-income countries (Spendelow, 2015b) described how coping responses often exhibited masculine traits, such as independence/self-reliance (e.g. not seeking help), ignoring negative emotions, or engaging in risky behaviours (e.g. substance use). Some men responded to depression through active social withdrawal and avoidance of others, or attempted to manage their appearance (e.g. appear as if they are feeling well) in front of others in order to 'protect' their masculinity and avoid social disapproval. Failure to manage emotions or live up to expectations about coping could lead to a sense of lost control, guilt and anxiety about perceived weaknesses (Player et al., 2015). A positive correlation has been found between higher adherence to masculine norms and a higher likelihood of experiencing depressive episodes (Oliffe & Phillips, 2008), and these coping strategies can be seen as potentially exacerbating difficulties. In contrast, typical masculine traits such as independence and responsibility to family were used by some men to legitimize help-seeking, reframing it as being proactive and engaging in problem-solving (Johnson, Oliffe, Kelly, Galdas, & Ogrodniczuk, 2012). In this way, dealing with symptoms was seen as 'fighting' or being 'in battle' with depression, which retained masculine norms while seeking help. Men also believed that engaging in activities such as increased work and physical exercise were useful, although these could also be 'escape' activities that did not ultimately deal with the problem.

In response to the fact that many studies about men's mental health focus on unhelpful behaviours and barriers to help-seeking (e.g. the review by Spendelow et al and study by Player et al described above) , Fogarty et al (Fogarty et al., 2015) aimed to highlight the positive and adaptive strategies that men use to prevent or manage depression. They interviewed 168 Australian men across focus groups and individual interviews, over half of whom had experienced depression in the past and just over a third of whom were experiencing current symptoms. Key strategies that men used to support their wellbeing included maintaining good physical health, having strong social connections, seeking professional help (including taking medication), and using approaches that they associated with 'typical masculinity' such as problem-solving and goal setting. The authors went on to undertake a national survey of helpful strategies for depression, which included 465 men (Proudfoot et al., 2015). Further strategies that men identified as helpful

included taking time out, keeping busy and rewarding themselves with something they enjoy.

Seidler et al (Seidler, Rice, Oliffe, et al., 2018) interviewed 20 Australian men who had received psychotherapy for depression symptoms to explore their experiences of engagement. They found that men preferred a goal-oriented, practical focus to therapy, which took a strengths-based approach with a clear structure and shared control of decisions. As above, the authors noted the extent to which masculinity played a role both in men's mental health and in their preferences for treatment, with men wanting to avoid feelings of dependence or weakness, and instead preferring a sense of reciprocity and joint working with their therapist.

Also in Australia, Player et al (Player et al., 2015) interviewed 35 men who had made a suicide attempt between 6 and 18 months prior to the study, asking about what may have been helpful in prevention. They similarly noted the role of masculine identity in the way that men experienced stressful events (i.e. the use of avoidant, isolative coping strategies). They highlighted the importance of emotion regulation, self-care and communication skills in interventions to improve internal coping and resilience. In particular, behavioural strategies such as increasing activity (e.g. exercise, hobbies) and improving social connectedness were seen to improve mood by breaking up routine, increasing opportunities for positive reinforcement, and acknowledging obligations to care for others.

Key learning from these studies:

- Positioning help-seeking as a responsible, problem-solving approach to difficulties may help to overcome stigma around asking for support.
- Eliciting and encouraging previous or current positive strategies to manage symptoms can help to engage men's own abilities to overcome difficulties.
- A practical focus to interventions, which take a collaborative, strengths-based approach may be most acceptable to men.

In summary, there is a wealth of rich qualitative literature about fathers' mental health and, more generally, men's mental health, which provides useful learning about an intervention for paternal perinatal depression. However, there are some gaps in this

literature. For example, men with poor experiences of being parented themselves, including those with histories of interpersonal trauma, may be particularly at risk of mental health disorders in the perinatal period. This issue arose incidentally in the work of Tolman and Walsh (described above) but was not focused on exploring men's understanding of these risks and the impacts they have. Furthermore, there are no interview studies of men in the perinatal period who have perpetrated violence against their intimate partners. This is important in order to understand how these risks can be reduced.

Whilst undertaking this thesis I had the opportunity to interview a group of men who had recently become fathers and who were taking part in a perinatal intervention to reduce violence against their current partner. These men had significant risk factors for perinatal mental health disorders, including histories of mental health disorders and interpersonal trauma.

Therefore, the current qualitative study sought to explore experiences of the transition to fatherhood in this group of men who are often under-represented in research Given the prevalence of domestic violence (see evidence on this below) any intervention targeting fathers needs to acknowledge this context and include means of identifying and reducing abuse. This data is therefore an essential component in the development of a perinatal intervention for fathers. The following sections summarise literature on fathers who are violent and provide further detail on the context for this study.

4.1.2 Domestic violence in the perinatal period

Domestic violence and abuse (DVA) is defined in the UK as, 'any incident or pattern of incidents of controlling, coercive, threatening behaviour, violence or abuse between those aged 16 or over who are, or have been, intimate partners or family members regardless of gender or sexuality. The abuse can encompass, but is not limited to: psychological, physical, sexual, financial, and emotional' (Home Office, 2013).

Worldwide, 1 in 4 women experience DVA (Office for National Statistics, 2018). While men may also experience violence in their relationships, women are at greater risk of repeated coercive, sexual or severe physical violence, reporting more frequent assaults,

more severe injuries and are more likely to be frightened as a result of domestic violence (Walby & Towers, 2018).

Prevalence estimates for DVA in pregnancy range from 3% to 30% (Van Parys, Verhamme, Temmerman, & Verstraelen, 2014). This is a significant public health issue, with poor physical and mental health outcomes for women, including increased psychiatric morbidity, and pregnancy and labour complications (Howard et al., 2013). Women who report experiencing DVA during pregnancy have more somatic symptoms and more hospital visits than other women, including symptoms such as high blood pressure, severe nausea, dehydration and urinary tract infections (Silverman et al, 2006). Furthermore, there are significant mental health consequences of domestic abuse. It is strongly associated with depression and post-traumatic stress disorder, and also with suicidal behaviour, sleep and eating disorders and social dysfunction (Devries et al., 2010; Ferrari et al., 2016; Trevillion, Oram, Feder, & Howard, 2012).

4.1.3 Intergenerational risks of violence

There is substantial evidence for an association between DVA and poor child outcomes (Alderson, Westmarland, & Kelly, 2013; McFarlane et al., 2014). Around 1 in 5 children in the UK experience domestic violence during their childhood, and it is estimated that over half of the children who have witnessed domestic violence are also victims of abuse and neglect themselves (Hamby, Finkelhor, Turner, & Ormrod, 2010). Exposure to domestic abuse in the early years is associated with adverse outcomes throughout childhood and adolescence including poor mental and physical health, lower academic achievement, and impaired social development (Evans et al., 2008; Holt, Buckley, & Whelan, 2008). Furthermore, it is established that children exposed to DVA have a greater risk of becoming victims or perpetrators of violence in their adult relationships (Bancroft, Silverman, & Ritchie, 2011), with poly-victimisation further increasing the risk of poor outcomes (Aakvaag, Thoresen, Wentzel-Larsen, & Dyb, 2017). Indeed, witnessing DVA and being a victim of child abuse are among the adverse childhood experiences (ACEs) described in a study by Hughes et al (2017). In this study, ACEs were defined as stressful or traumatic experiences occurring during childhood, and included such things as parental mental health disorders and alcoholism, as well as physical, sexual and emotional abuse, neglect and living in a household with domestic abuse. The study demonstrated a strong

link between four or more ACEs and victimisation and perpetration of interpersonal abuse, including DVA, in adulthood.

How can we understand these intergenerational cycles of violence? Postnatally, a key mechanism through which this transmission of risk is thought to function is parenting behaviour, including parent-infant interaction and co-parenting practices (McHale & Irace, 2011; Murray et al., 2015). For victims, DVA can undermine parents' ability to provide the consistent, sensitive and responsive caregiving that babies and young children need. Parenting in these circumstances may be unpredictable, unresponsive or frightening. This is especially the case if parents did not receive this level of caregiving when they were children and therefore lack models of safe, responsive relationships (Howarth et al., 2016; National Scientific Council on the Developing Child, 2012).

As well as victims' parenting being potentially undermined and impacted by DVA, men who are violent have been shown to be less sensitive and responsive to their children's needs, to show less affection, and perceive their children more negatively (Stewart & Scott, 2014; Holt 2015). Qualitative studies exploring the experience of fathering of violent men indicate poor parenting practices such as being physically punitive, rigid, and manipulative (Perel & Peled, 2008).

In the co-parenting relationship, lack of mutual support and negative communication are associated with poor parenting practices such as insensitivity, harsh discipline, and low expression of affection (Petch & Halford, 2008). Men who are violent may provide negative messages to their children related to violence and women and undermine the mother's parenting role, and disparate or contradictory child-rearing practices may impact on the development of self-regulation (McHale et al, 2019).

These compromised and impaired parenting practices constitute interpersonal trauma for the baby, which can have devastating consequences. Evidence from studies of neurobiological development following early interpersonal trauma indicate deficiencies in memory and executive functioning, emotional regulation, inhibition control, and appropriately identifying threats (Kar, 2018). This can lead to insecure and disorganised attachment patterns, poor emotional development, problems in interpersonal relationships

and social functioning, and an inability to keep oneself safe (Raby, Labella, Martin, Carlson, & Roisman, 2017; Van der Kolk, 2014).

Despite these findings, there is little research conducted with fathers who are violent in the early years of the child's life, and especially in the postnatal period, to explore their understanding of parenting and the role of a father, and to identify the beliefs and behaviours they hold in relation to child rearing and co-parenting. Without this evidence, it remains unclear how interventions can be best targeted for fathers in order to prevent adverse outcomes for children.

Intervening early in the child's life, including during pregnancy, is likely to be beneficial not only due to the fact that fatherhood represents a significant motivator for change (Meyer, 2018), but also to prevent early childhood trauma and its neurobiological, behavioural and emotional consequences. Interventions need, therefore, not only to support violent men to acknowledge and be accountable for their abusive behaviour but also to recognise their parental responsibility. Indeed, a recent review of ten interventions for fathers who are violent, including groups and family therapy, identified two main objectives of such programmes: increasing accountability and empathy while decreasing violence; and fostering positive fathering and father-child relationships (Labarre, Bourassa, Holden, Turcotte, & Letourneau, 2016). However, most of these programmes do not include parallel support for victims and children, and evaluation is often rather limited. Even where interventions are aimed at the whole family, for example for those families where the victim does not wish to separate or where there will be ongoing contact with the father (Stanley & Humphreys, 2017), these tend not to target the early years of the child's life, where preventative early parenting work may be most beneficial.

4.1.4 For Baby's Sake

One such programme which aims to fill this gap is *For Baby's Sake.* This UK-based whole-family intervention, developed by the For Baby's Sake Trust (formerly the Stefanou Foundation), is aimed at families in the perinatal period where there is identified DVA. The psychosocial programme targets DVA, mental health, parenting and the parents' own history of trauma in order to break intergenerational cycles of trauma and abuse (Domoney et al., 2019). Men who engage in *For Baby's Sake* sign up in the

antenatal period and receive individual therapeutic support up to two years postpartum, which encourages acknowledgement of abusive behaviours, provides tools for behaviour change and includes exploration of their own traumatic histories. Alongside this, they receive parenting interventions such as video interactive guidance to support the development of a healthy relationship with their baby, and advice and support around building a safe co-parenting relationship. Women receive parallel input, which is delivered separately but in a coordinated way.

In 2015 the For Baby's Sake Trust commissioned King's College London and its partners to evaluate two prototype sites of *For Baby's Sake.* The two prototype sites were chosen partly because of their different populations, urbanicity, and public sector structures. One site covered an area within the county of Hertfordshire which has a population of approximately 1.18 million people, of which 81% are white British, 62% are of working age and 32% have a level 4 qualification (i.e. university degree, higher education or professional qualification); the London site, which covered three boroughs, is a highly diverse and transient community, with a population of approximately 560,538 people, of which less than 50% are white British, around 70% are of working age and around 50% have a level 4 qualification.

I was the main researcher on this evaluation and my role included recruiting families who had signed up to the programme to be part of the evaluation. This aspect of the evaluation consisted of undertaking research interviews with men and women at three time points – baseline, or close to sign up to *For Baby's Sake*; around 1 year into the programme; around 2 years into the programme. Interviews included a range of self-report and researcher-administered measures covering physical and mental health, quality of life, perpetration and victimisation of DVA, parenting and bonding. Postnatal interviews also included measures of child functioning and parent-infant interaction. During the recruitment period (March 2015 to March 2017), the contact details of a total of 88 individuals who provided consent for contact were received by the evaluation team across both sites. This was approximately one third of those referred to the programme. Baseline interviews were completed with 40 individuals (45%) – 27 women and 13 men. Reasons for non-completion included withdrawal of consent (n = 11), baseline period passed before an interview could be arranged (n = 4), persistent non-response to attempts at

contact (n = 12), withdrawal from the programme and unable to contact/declined baseline (n = 21).

Data from the evaluation indicated that many men who were engaged with *For Baby's Sake* had mental health disorders. This was somewhat anticipated due to the many risk factors that the target population had and previous research on the associations between DVA perpetration and mental health (Oram et al., 2014). My role in the evaluation gave me a unique opportunity to collect further data from the fathers who were engaged in the programme and to explore in greater depth their experiences and beliefs around fatherhood and mental health.

Understanding the experiences and beliefs of men who are abusive towards their partner at the time of becoming a father and who are willing to engage in an intervention to change abusive behaviours is essential to aid understanding of how interventions can impact on the beliefs and behaviours of such men. This evidence can provide insights into motivations for engaging with interventions in general and potentially support future adaptations and refinements of *For Baby's Sake* to enhance retention.

Furthermore, it allows exploration of mechanisms of change for men with complex risk factors for perinatal mental health disorders which are difficult to elucidate in quantitative evaluations. This is particularly pertinent for the current study which, as part of this thesis, seeks to understand the ways in which beliefs and behaviours can be modified for fathers from a wide range of backgrounds, including men whose voices are often not heard.

Finally, it contributes to the wider literature on the fathering of abusive men, elucidating some of the ways in which mental health and domestic violence perpetration are associated, and providing indications of useful future research.

4.1.5 Theoretical approach

As described in Chapter 1, I took a critical realist approach to this study. This approach accepts that there are objective realities that exist and operate independently of our awareness, which can be studied and measured. However, it also acknowledges that these measurements and observations are fallible and that we cannot therefore know reality with certainty (Trochim, 2020).

Critical realism recognises social context and social conditioning which impact on our descriptions and experiences of the world (Archer et al, 2016). These factors create biases, for example, through culture or gender, which lead to differences in our perceptions of reality. Therefore, while reality may exist independently of us, our knowledge of it is influenced by historical, cultural, and social factors which means that our attempts to describe the world are limited and will only ever be approximations of the 'truth'.

This had two implications for this study. Firstly, I needed to acknowledge my own biases and limitations and reduce them where possible. I did this by being reflexive about the ways that data was collected and analysed. This is explained more fully in the section 'Reflexivity, context and gender' below. Secondly, existing theory is an important part of studies which use a critical realist approach as the aim is to get closer to the 'truth' by assuming that any one explanation of reality is fallible. I therefore sought to triangulate the data from this study with other sources, including both existing theories as well as data from the other studies in this thesis, to better situate the findings and make sense of them.

This study also took a feminist approach. The term 'feminist research' refers to approaches which share a commitment to promote women's rights and safety and to produce knowledge which improves women's outcomes (McHugh, 2014). The origins of this thesis come from my work as a clinical psychologist in a perinatal mental health team and as a researcher the Section of Women's Mental Health. While the focus is on men's mental health and understanding men's experiences of the transition to parenthood, the overall aim is to improve outcomes for the whole family by reducing distress, conflict and abuse, and enhancing parental relationships and wellbeing. Indeed, McHugh (2014) emphasises that feminist research is not research *about* women, but research *for* women.

Within this study, while I sought to understand men's perspectives through a trauma-informed lens, I also held in mind the harm that their behaviour had inflicted and ensured that I did not collude with abusive narratives or condone their actions. Furthermore, it is necessary to acknowledge the social and historical context of violence against women, the fact that DVA is a gendered experience, and the ways in which societal structures create inequalities and grant men a sense of entitlement towards women. This study therefore sought to highlight ways in which men's narratives either did not acknowledge

abuse or else minimised it or blamed others for it. The aim, ultimately, was to improve interventions for men in such as a way as to reduce harm towards women and children.

4.2 Aims

The aims of this qualitative study were two-fold. They included contributing to the overall aim of the thesis, which is to develop an intervention for paternal depression, and as such the study sought to identify mechanisms of change in a sample of men who have considerable risk factors for poor mental health. However, due to the unique nature of the sample, the study also aimed to contribute to the wider literature on fathers who are violent, shedding light on their experiences and motivations in order to inform researchers and clinicians who work in the field of violence, including colleagues at the *For Baby's Sake Trust*.

Therefore, the aims are:

- To explore the experience of becoming a father in a sample of men who are taking part in *For Baby's Sake* and who are using violence in their current intimate relationship.
- To identify mechanisms of change within men's narratives which may indicate important targets for a perinatal intervention.

4.3 Methods

I have followed the consolidated criteria for reporting qualitative research (COREQ) guidance in the reporting of the methods and results of this study (Tong et al, 2007). The checklist can be seen in Appendix 8

The study received full ethical approval from King's College London Research Ethics Office (reference number: HR-16/17-4545) (see Appendix 9).

4.3.1 Study design

This was a cross-sectional qualitative interview study.

4.3.2 Recruitment

The population consisted of men who were taking part in *For Baby's Sake*. This programme aims to recruit families in the antenatal period, where the male partner has perpetrated domestic violence against the female partner. To take part in the programme, fathers had to be aged 17 or over by the time their baby was born and express a desire to co-parent the infant on delivery. A subset of this population had agreed to take part in the *For Baby's Sake* evaluation, which was led by King's College London. I was the main researcher on this evaluation and had therefore been responsible for recruiting families into the evaluation. Further eligibility criteria for the evaluation were willingness to participate in the research and a sufficient level of English to complete questionnaires and respond to spoken questions. Exclusion criteria included being unable to give informed consent or those who were considered by the researcher to be too unwell or distressed to take part.

The main potential participants for the current study were those who had signed up to the *For Baby's Sake* evaluation and had consented to be contacted about other, related studies. Where men had consented to this, I contacted them to ask if they were interested in taking part in the current interview study. Those who were interested were sent an information sheet which described the procedure in more detail. For some men, the information sheet was sent by email. For those who did not use email, their practitioner shared a hard copy of the information sheet with them. If they were willing to participate, a convenient time and location for the interview was arranged.

In addition, men who were engaged with *For Baby's Sake* but were not part of the evaluation were also eligible for the current interview study. This included men who had signed up to the programme early, before ethical approval for the evaluation had been obtained, and also those who had signed up later, after recruitment for the evaluation had been completed. In these cases, *For Baby's Sake* practitioners were asked to tell men about the study and seek consent for contact by the researcher. I then contacted potential participants and provided them with further details about the study. As above, if they were willing to participate, a convenient time and location for the interview was arranged.

Thirteen men signed up to take part in the *For Baby's Sake* evaluation between August 2016 and April 2018 and were therefore potential participants for the current study. Of these, four men declined to take part, all saying they were too busy. In addition, *For Baby's Sake* practitioners provided consent to contact two further men who were engaged in the programme. Of these, both initially agreed to take part in the interview. However, one of these men subsequently declined to participate. The final sample therefore consisted of ten men.

4.3.3 Setting

Interviews were held at a time and location which was convenient for the participant while maintaining safety and confidentiality. This included the participants' homes, the *For Baby's Sake* site (an office in a local authority building) and local children's centres. The Standard Operating Procedures developed for the *For Baby's Sake* evaluation were followed, including the use of a buddy system and study mobile with emergency contacts (see Ethical considerations below). Men received a £20 Love2Shop™ voucher as a thank you for taking part in the study. This was the same as the gift they received for taking part in the *For Baby's Sake* evaluation.

Broom et al (Broom, Hand, & Tovey, 2009) describe how setting can play an important role in qualitative interviews, potentially influencing interviewee responses. Attempts were made to ensure all interviews were conducted in a private setting where confidentiality could be maintained. Occasionally, when interviews were conducted in the man's home, the space was small and other family members were in adjoining rooms. In these instances, I checked in regularly with the participant to ensure they were comfortable to continue answering the questions and reminded participants that they could stop at any time. Similarly, where interviews were conducted at the *For Baby's Sake* site, participants sometimes saw their practitioner in the hallway and briefly spoke with them. This could potentially have influenced how men perceived the interviewer in terms of their relationship with the programme. In these instances, I reinforced at the beginning of the interview the fact that I worked for a different organisation and that all data would be confidential (see 'Reflexivity, context and gender' below for further details about this).

4.3.4 Data collection

Participants were asked to provide basic demographic information at the beginning of the interview, including their date of birth, ethnicity, employment status, highest qualification, and relationship status. They were also asked to provide consent for the researcher to access further information about them, which had been collected within the main *For Baby's Sake* evaluation. This included the length of time they had been on the programme, their baby's date of birth, any self-reported mental health disorders, and whether they smoked cigarettes. All participants consented to this. The participant who had not taken part in the main evaluation was asked to provide this additional information at the start of the interview.

4.3.4.1 Topic guide

A semi-structured topic guide was developed to structure the interview. This was based on other studies in the field (Håland, Lundgren, Lidén, & Eri, 2016; Rominov, Giallo, Pilkington, & Whelan, 2018) and the research questions/aims of the study. It outlined key themes for discussion with probes under each theme to help structure the interview. The topic guide can be seen in Appendix 10

The topic guide was reviewed by a number of different people, including colleagues within the research team; an expert group conducting research on DVA perpetration and substance use at King's College London; and the Feasibility and Acceptability Support Team for Researchers (FAST-R), a team of people with experience of mental health problems and their carers who have been specially trained to advise on research proposals and documentation. Feedback from these sources helped to refine some of the themes and probes. Specifically, it was suggested to begin with questions about previous experiences of parenting in order to situate current experiences in a wider context; it was suggested to include questions about how parenting has changed over time in order to get a clear sense of changes; and it was suggested to keep the conversation fluid as many of the topics overlapped (for example, questions about challenges in the transition to parenthood often overlapped with questions about changes in the couple relationship) and so it may not be necessary to ask all questions if they have already been discussed.

The first three interviews provided an opportunity to pilot the topic guide. These interviews indicated that it was hard to cover all topics within an hour. As the information sheet had stated that interviews would be between 30 and 60 minutes, it was decided not to include questions about the impact of the *For Baby's Sake* programme. These questions would be covered within the main evaluation and so data about this could be accessed if required. I also noted helpful follow-up questions during these three preliminary interviews (for example, where men indicated that they had not spoken to anyone about being a dad, I asked why this was) and made some changes to phrasing to aid understanding (for example, instead of asking about the 'impact' of changes, I asked what difference changes had made to them).

The interview opened with some general questions about the number of children that men had and their names and ages. This was intended to provide some easy questions which men felt comfortable answering before continuing with more open-ended questions. The main themes explored in the topic guide were: becoming a father, learning about fatherhood, and relationships across the transition to fatherhood. Finally, men were asked to look ahead and think about their hopes for the future in relation to fatherhood. They were also asked if there was anything else they would like to discuss. The topic of violence was not explicitly asked about.

Becoming a father

This initial topic asked men about any previous experiences of parenting as well as the experience that they had most recently. This included exploring their feelings about becoming a father, their approach to parenting, how they have dealt with any challenges and how their life has changed as a result of becoming a father. This helped to orient men to the context of fatherhood and to reflect on how they have experienced it. Interviews often followed a chronological course, asking first about discovering the pregnancy, and then about the different stages of the perinatal period up until the present. In this way, men often provided a narrative account, with the interviewer probing at certain points to find out about particular thoughts and feelings that accompanied moments of change or challenge.

Learning about fatherhood

This topic asked both about concrete examples of learning across the transition to parenthood, for example, who they ask for advice or who they model their parenting on, and also about more implicit ways of understanding what it means to be a father. Men were asked to reflect on what has influenced their ideas about being a dad, including their own experiences of being parented and their concept of an 'ideal' dad.

Relationships

This topic explored both the relationship men had with their partner and also with their baby. Aspects of this theme had often already arisen within the previous discussion, so I therefore wove some of the topics around relationships into the two previous topics, where appropriate. Questions included experiences of change in close relationships and how these changes are managed, approaches to parenting, and the best/most challenging aspects of their relationship with the baby.

Hopes for the future

Towards the end of the interview, men were asked about how they hoped their relationship with their baby might look in the future and their hopes for their child as they grew up. This aimed to end the interview on a positive, forward-thinking note.

At the end of the interview, men were thanked for their participation and were given the opportunity to add any further thoughts or reflections that had not yet been spoken about.

4.3.4.2 Interviews

I conducted all of the interviews. Interviews lasted between 21 and 57 minutes (mean length 43 minutes). An audio recorder was used to record the interviews. The topic guide provided an overall structure to the interview, however, I also asked follow-up questions and explored particular issues that men brought up which were outside the interview guide. This flexibility allowed for the emergence of new thoughts and ideas. See 'Reflexivity, context and gender' below for more details about the interview process.

4.3.4.3 Transcription

A professional transcription company transcribed the recordings verbatim. When these were returned, all transcripts were checked for accuracy against the original recording and any identifying information was removed. Both audio recordings and transcripts were stored in a secure, password-protected drive on a King's College London computer which was only accessible to the researcher.

4.3.4.4 Data saturation

Data saturation commonly refers to the point at which it is not considered necessary to continue collecting data as new ideas are no longer being expressed (Fusch & Ness, 2015). It has also been defined in terms of the point at which to stop analysing the data (sometimes referred to as 'theoretical saturation') (Birks & Mills, 2015). These two concepts overlap to some extent - as researchers are familiarizing themselves with the data during collection, and potentially doing preliminary analysis alongside collection, they may become aware that few novel concepts are being expressed by participants. This is also impacted by whether the approach is largely *deductive* i.e. the researcher relies mainly on pre-defined codes or themes and therefore saturation refers to the point at which these are sufficiently represented in the data, or largely *inductive* i.e. codes are developed from the data and therefore saturation refers to the point at which no new codes or themes are identified. These approaches are both suitable for analysis which is essentially thematic (Saunders et al., 2018).

In this study, themes were identified in both an inductive and deductive way. I am aware of theories around the psychology of having a baby and the kinds of challenges this brings, as well as impacts on mental health and theories of perpetration to do with concepts of masculinity and power. This was also reflected in the topic guide, which was developed around particular areas, which included telling the story of the transition, highlighting challenges in this transition, talking about ideas of fatherhood and where you learn to be a father. This provided a partial *a priori* template to organise the data. Similarly, there is a function to the data i.e. answering questions about what a good intervention would look like, so analysis including looking for possible triggers or maintaining factors to help answer this question. In this way, both during data collection

and analysis, I was aware of the range of responses to these questions and the extent to which novel ideas were being expressed.

However, I also wanted to learn from the data i.e. allow for the possibility of new ideas and concepts which did not fit into my current understanding and highlighted new areas of concern or growth for fathers. Therefore, I remained curious about what the men said and followed their lead if new topics came up (e.g. talking about older children or past relationships). This provided space for participants to express other ideas around the central theme of fatherhood and allowed me to explore their views and experiences in more detail.

The aim within this study was to continue collecting data until saturation was reached, both in terms of responses to the pre-defined questions and any novel areas that came up. However, there were a number of factors which impacted on this and meant that saturation may not have been reached across all themes: (1) The men in the sample were quite heterogeneous and there were a limited number of potential participants i.e. those who had taken part in *For Baby's Sake*, (2) there were occasions in interviews when the participant appeared uncomfortable or restless, and I made the decision to end the interview rather than continue to collect data, despite the possibility of new ideas being expressed, (3) the interviews took considerable time to organise due to safety protocols and the difficulties of contacting some participants, and therefore a lack of resources meant it was not feasible to continue collecting more data. Despite these limitations, several broad themes reached a point where no new ideas were being expressed (particularly around conceptions of fatherhood and the emotional rollercoaster of becoming a parent) indicating that saturation was reached. These tended to be themes which overlapped with literature from other, non-abusive, samples of fathers. In contrast, some of the themes around violence and the associations with mental health did not reach saturation, with small numbers of men discussing these ideas and often in different ways. This may partly be due to the fact that explicit questions about violence were not included in the topic guide and, therefore, there was less structure around these discussions. However, it is likely to also have been due to the varied contexts and experiences of the participants and the different ways that they made sense of these. While this is a limitation of this study, it highlights the need for future research to focus specifically on fathers with

multiple risk factors and ensure sufficient time and resources to do justice to the complexity of men's lives.

4.3.5 Reflexivity, context and gender

It is necessary for researchers to make their perspectives and biases explicit and to adopt a reflexive approach which considers the ways in which their beliefs and values influence the research. In this study, not only was it important to consider my personal and professional background as important contexts, but also my gender, my beliefs around DVA, and the stance I took in relation to the participants. These factors influenced the development of the topic guide, the approach I took in the interviews, and also the analysis.

I am a white British female clinical psychologist specialising in perinatal and infant mental health and working mainly in a research setting. Given my training as a clinical psychologist, I have extensive experience of interviewing men and women about their personal experiences and taking an open, curious stance in order to explore the person's beliefs and assumptions. This includes the use of open questions, being aware of any assumptions I am making or conclusions that I am drawing and ensuring that I check the validity of these through further questions, and using summaries to check understanding and provide opportunities for the interviewee to correct me.

In research on men, Liu (Liu, 2005) describes the importance of understanding one's own assumptions and biases about men and having an awareness of masculine cultural values when working with men. My previous research, which has included the other studies in this thesis, as well as a longitudinal study on the impact of fathers' mental health on their children's outcomes and the mixed-methods evaluation of *For Baby's Sake,* has provided me with a good understanding of the literature about men's mental health, stigma, and masculinity. This includes issues around the recognition of mental health difficulties, language and labelling of problems, and individual and institutional barriers to help-seeking and engaging with support. Nevertheless, this knowledge is theoretical, and I have not had the experience of being male and facing these difficulties. Furthermore, Broom et al (2009) note how gender permeates all aspects of our social lives and that interviewers and interviewees enact socio-cultural expectations of gender during data

collection. Where females are interviewing males, this can potentially have impacts such as reinforcing women as passive listeners and allowing men to take control of the process of the interview, or pressure to reinforce cultural ideals of masculinity by playing down the vulnerability of the man (Pini, 2005). Alternatively, some researchers note the possibility that men may feel more comfortable talking about topics such as family life with women, and may feel it is more acceptable to discuss their emotions with a female interviewer (e.g. Hand & Lewis, 2002).

I had previously met with all but one of the participants as part of the independent evaluation of *For Baby's Sake* and so had established some level of rapport prior to the interview. Furthermore, due to my association with *For Baby's Sake* and the fact that most of the men had a positive relationship with their practitioner and perceived the programme to be supportive and non-judgemental, this may have aided the process and allowed men to feel more comfortable in my presence compared to an interviewer without these associations. Most men had completed several modules of the programme at the point at which I met them and had, therefore, begun the process of self-reflection and were being supported by their practitioners to express their experiences in words and to make links between their emotional states and behaviours. These factors appeared to aid some of the men to discuss the interview topics openly and to describe the things they had learned about themselves and their relationships over the previous months. Nevertheless, it is possible that some men chose not to disclose parts of their experiences to me. Given that there is a level of shame and stigma associated both with mental health disorders and with the perpetration of violence, it may have been that there were certain experiences that men were not comfortable to share, especially with a female researcher who they may have perceived as being very different to them. Indeed, a minority of the men provided only brief responses to the questions with little detail. It is uncertain whether this was due to a choice not to share their views or whether they were unable to find a way to express their ideas.

A further key context to the interviews was, of course, DVA. I am familiar with the literature around perpetration of DVA and fatherhood, including a range of approaches which are taken to explain men's behaviour in these contexts. My training and my experience of working with a wide range of people with mental health disorders has also

given me certain beliefs about change. I believe in each person's ability to adapt and thrive in the right conditions and in the transformative power of a non-judgemental, collaborative relationship which is based on respect and dignity. In both my work and personal life, I take a trauma-informed approach to relating to others, attempting to understand people's behaviour based on their past experiences and current defences. I was therefore in agreement with the aims of *For Baby's Sake* i.e. to take a trauma-informed approach to reducing DVA by understanding the experiences and needs of male perpetrators and providing them with an opportunity to overcome past traumas. However, I am also a feminist and have worked on several projects related to violence against women, which have highlighted the damage and ongoing trauma caused by violent and abusive behaviour of male perpetrators. Furthermore, I believe in people's ability to make conscious choices about their actions and do not believe that a history of trauma is a sufficient way to explain abusive behaviour. Both of these contexts had important influences on the way the interviews were approached and conducted.

I found that it was necessary to balance empathy for the men in the sample with anger about what they have done. It was essential to establish rapport to do the interviews well, but I was careful not to collude with harmful narratives about abuse, women or fatherhood. This balancing act has also been described by other authors who have interviewed violent men (Perel & Peled, 2008) who note the importance of maintaining a feminist viewpoint throughout the research, shedding light on the harmful effects of violence while also adopting a warm, respectful attitude during the interviews. As noted above, I have a trauma-informed approach to my work and my training had a strong developmental psychopathology focus. Therefore, I am inclined to understand people's behaviour and beliefs in the context of their early family relationships, experiences of interpersonal trauma, and their attempts to maintain their sense of self and safety in the face of perceived threats which trigger a highly sensitive stress-response system. This understanding allowed genuine empathy for some of the contexts that men described, particularly around their experiences of being parented and their current mental health difficulties. When men talked about these difficulties, I often explicitly expressed my empathy. However, when talking about their own abusive behaviour, I ensured that my words and expressions did not convey an acceptance of this behaviour (for example, I did not nod or use phrases such as 'I see' or 'I understand'). Instead, I attempted to maintain

a respectful interest in their narratives which avoided criticism and opened up opportunities to explain behaviours rather than just describe them. This approach was aided by virtue of the men being on the programme. Most men had acknowledged abusive behaviours and were involved in efforts to change. Similarly, they were challenged by their practitioners to question their beliefs and understand the impact of their actions. Therefore, the overall context of the discussions was around change towards better, safer relationships.

In terms of analysis, a similar approach was taken – key themes were developed around the impact of past experiences and men's fears and vulnerabilities in the transition to parenthood, but awareness was maintained on the damaging impacts of men's abusive behaviours and the ways in which they sometimes minimised or denied these impacts.

4.3.6 Ethical considerations

4.3.6.1 Informed consent

I am an experienced clinician and I undertook Good Clinical Practice (GCP) training in obtaining informed consent in the conduct of research prior to the interviews.

During recruitment, potential participants who had been told about the study by their practitioner and had consented to be approached were offered clear information verbally and in writing (Participant Information Sheet – Appendix 11) about the purpose, subject and nature of the study and what would be required of them if they consented to participate.

During the formal consent process, participants were informed that their responses would be anonymous and confidential (e.g. names and identifying information would be removed from transcription and interview recordings and transcriptions would not be seen by anyone outside of the study). I checked that they had read and understood the PIS and obtained written informed consent (the consent form can be seen in Appendix 12)

4.3.6.2 Disclosure of personal information

As the topic of study included issues that relate to the safety of vulnerable adults and children, all participants were informed about the limits of confidentiality in cases where risk of harm to themselves or others is disclosed. This information was provided both in the PIS and also verbally before the interview. Specifically, if the participant disclosed information which indicated a risk of death or serious harm either to themselves or others (e.g. their children), I would let the participant know that information needed to be disclosed in accordance with these limits. They were informed that in some situations it may be necessary to disclose personal information without their consent if it was within the public interest and that the GMC guidance on confidentiality would be followed i.e. disclosure of personal information without consent may be justified in the public interest where failure to do so may expose the participant or others to risk of death or serious harm. In cases where the participant or others were exposed to a risk so serious that it outweighed the participants privacy interest, consent to disclosure was sought. If it was not practicable to seek consent, the information was disclosed to an appropriate person or authority. I did not have to take this action during the study as none of the participants disclosed any risk of harm.

4.3.6.3 Participant and researcher safety

Standard operating procedures which were used for the main evaluation were also used for this study. These were developed to ensure that participants, their families and the researcher remained safe when making contact and conducting the research.

Given the nature of the questions and the fact that they have the potential to cause distress, the following measures were taken to support participants:

a. When arranging the interview with the participant, I asked for verbal consent to inform their practitioner of the time and date of the interview so that practitioners may be available to offer support after the interview if needed.

b. When taking consent, I explained to participants that they could take time in answering questions and do not have to answer questions that they do not want to.

c. I ensured that the location where an interview took place was private and secure and could not be overheard. If interviews took place at a community site or at the participants' home, I discussed any safety issues with relevant professionals and clarified that it was safe for me to conduct the interview at that location.

d. At the beginning of the interview, I asked participants if they would like to nominate a contact for support, should they become distressed.

e. During the interview, I closely monitored participants for signs for distress and, if observed, took appropriate action, including: asking the participant if they would like to take a short break, skipping questions that caused particular distress, offering to complete the interview at another time, or reminding them that they do not have to answer all questions and can stop at any time.

f. Contact details of the charity, RESPECT, were provided on the Participant Information Sheet in case the participant wished to access further support.

g. I had access to a mobile phone at all times during interviews and gave details of interview locations, start times and approximate end times to colleagues at their research department. The telephone number provided to participants for contacting researchers was used for research purposes only.

4.3.6.4 Data storage

Hard copies of personal data were stored in locked filing cabinets in the offices of the research team. The office was locked when the research team was not present and all access to the building corridors was via identity card. Electronic versions of personal data, including audio and visual data, was stored on a secure computer network (to which only the research team have access) on password protected computers and laptops at King's College London. The main spreadsheets which include identifiable information were also be password protected and stored on a secure College network.

Completed questionnaire packs (for demographic information) had no identifiable information on them. The information provided by participants was confidential and all participants were assigned a unique ID number. Participants' ID number was used at all

times when managing the research data. Any data collected that included identifiable details about study participants, such as consent forms, was stored separately from the research data.

Audio-recorded interviews were anonymised during transcription and no identifiable details were included in interview transcripts.

4.3.7 Data analysis

4.3.7.1 Method of analysis

This study aimed to explore men's experiences of becoming a father in the context of DVA in order to inform intervention efforts i.e. drawing from the experiences and realities of the men's narratives to consider particular topics, issues and barriers to supporting men to overcome challenges. As described in Chapter 1, as a mixed-methods approach was taken in the thesis, the analytic methods for the studies were selected to compliment other aspects of the thesis. Thematic analysis is an approach which is used to identify, analyse, organise, and describe themes, and is particularly useful for research with an applied focus. Phenomenological approaches, in contrast, aim to explore underlying structure or the essence of experience through detailed study of individual cases rather than being oriented towards finding patterns or commonalities. While this may have been interesting in terms of deepening the understanding of men's subjective experience, this would have had less of a pragmatic approach for the current study. For this reason, thematic analysis was considered the most appropriate approach.

The steps of thematic analysis, as outlined by Braun and Clarke (2006), are outlined below, along with additional details of how these were undertaken within the current study.

1. Familiarizing yourself with your data - Transcribing data, reading and re-reading the data, noting down initial ideas.

The transcription was completed by a professional transcription company. As well as reading the transcripts several times, I also listened to the audio files again as I found this

gave a different dimension to the data, and noted down initial ideas for each of the transcripts.

2. Generating initial codes - Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.

This was done by importing all the transcripts into NVivo 12 software. This stage was initially guided somewhat by the topic guide, with parent nodes (which represent the main overarching codes in NVivo) reflecting the sections of the guide, and more detailed codes, generated from line-by-line coding of the transcripts, being allocated as child nodes (which represent more detailed codes that are subordinate to the parent nodes). This allowed me to summarise the variety of responses to the questions, while getting to know the data more thoroughly and beginning to see patterns. This was therefore a somewhat deductive approach, using my prior knowledge and the template of the pre-defined questions to explore the data. However, I also conducted inductive line-by-line coding of the transcripts and noted some novel themes at this stage, which did not fit within the pre-defined topics. This added an inductive element to the analysis, allowing for the identification of new insights (see section 'Data saturation' above for a more in-depth discussion of how these approaches were used).

3. Searching for themes - Collating codes into potential themes, gathering all data relevant to each potential theme.

At this stage, I began to analyse the data at the broader level of themes, systematically collating codes and beginning to consider possible labels for the themes and sub-themes which were identified. The structure of the topic guide became less important here, as some themes cut across the topics and new themes were identified which did not fit the pre-defined structure. This helped to identify codes which did not seem to belong under any theme, and therefore indicated either a need for a new theme or, possibly, a redefinition of existing themes.

4. Reviewing themes - Checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.

This stage involved reworking of the themes to help make conceptual sense of the data, while ensuring that the overall structure still reflected the details of men's narratives. This meant reading all the coded extracts within each theme to check they created a coherent pattern, and also considering the overall data set to check it makes sense in terms of the research question.

Braun and Clarke (2006) recommend that the researcher drives this stage of the analysis forward by asking themselves the following questions: 'What does this theme mean?', 'What are the assumptions underpinning it?', 'What are the implications of this theme?', 'What conditions are likely to have given rise to it?', 'Why do people talk about this thing in this particular way (as opposed to other ways)?' and 'What is the overall story the different themes reveal about the topic?'. These questions were helpful in linking the data back to my theoretical understanding of the topic and to begin to consider the ways in which the data added new insights to the literature.

I drew on techniques of iterative categorization (Neale, 2016) for this stage and the next two stages. This involved exporting each node (i.e. the raw data within a theme) into a word document, labelled as the theme that the node represented. I then went through the file, collating data for each subtheme and noting how many participants had contributed to it, highlighting illustrative quotes, and organising the subthemes into a logical order. I also used this document to start noting connections between subthemes, competing ideas within themes, and links to other theories or constructs, guided by the questions above.

Following this, a thematic map of the analysis was produced (see Figure 6 in Chapter 5)

5. Defining and naming themes - Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definitions and names for each theme.

This process also took place as part of the iterative categorisation described above i.e. labelling each theme, ensuring it was coherent, and generating a brief description of the theme to capture its key features.

6. Producing the report - The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back the analysis to the research question and literature, producing a scholarly report of the analysis.

This stage was relatively straightforward due to the strategies used in the previous two stages. I collated the separate word documents, selected the most appropriate quotes, and created a narrative around the data to aid the reader's understanding. The next chapter presents the results of this analysis.

4.3.7.2 Inter-coder agreement

To improve trustworthiness of the data, a second researcher (my supervisor – KT) coded one of the transcripts. JD and KT then met and compared each other's coding frame from the jointly-coded transcript to establish a percent agreement, as an initial marker of inter-rater agreement. JD and KT went through each of the themes in the transcript and compared their similarities and differences; codes that were the same and different were charted. Following Miles and Huberman (1994) approach, the total number of agreed themes from each of the two coding frames were divided by the total number of agreed and disagreed themes to establish an initial inter-rater agreement of 66%. Following this review, the coding framework was discussed to resolve any discrepancies and decide on how to integrate both researchers' codes. This framework was then used for subsequent coding.

In the next chapter I present the results of the study, along with a discussion of the implications for intervention development.

CHAPTER 5 – BECOMING A FATHER IN THE CONTEXT OF INTIMATE PARTNER VIOLENCE: A QUALITATIVE STUDY. RESULTS AND DISCUSSION

This chapter presents the results of the thematic analysis of interviews with men taking part in a perinatal programme to reduce DVA. Participant characteristics are described first, followed by a detailed description of the identified themes, including illustrative data extracts from the interview. The discussion explores the links with other literature and reviews the strengths and limitations of the study. Implications for the overall aims of the thesis are then discussed.

5.1 Results

5.1.1 Participant demographic characteristics

Demographic characteristics of the sample can be seen in Table 4. A total of 10 fathers were interviewed for this study. The mean age of participants was 29 (sd 7.2) and the mean age of the baby at interview was 8 months (range 3.5 months to 15 months). All men were White British. Two men were first time fathers, while the others had between 1 and 6 older children. Six of the men were cohabiting with or married to the baby's mother at the time of interview. The other four were in a relationship with the mother of the baby but living elsewhere.

Six men had self-reported mental illness. This included depression (1), anxiety (2), Obsessive Compulsive Disorder (1), PTSD (1) and schizophrenia (1). Two men also reported being diagnosed with Attention deficit and hyperactivity disorder. Nine men reported smoked cigarettes.

The average time on the programme at the time of interview was 11 months (range 4 to 21 months). Therefore, men had been exposed to different amounts of the intervention and input from practitioners, resulting in the interviewees being at different stages in the process of change.

Table 4 - Demographic characteristics

N=10	*n*
Age*	29 (7.2)
Education level	
No formal qualifications	2
GCSE	3
A-Level/NVQ/BTEC	4
Bachelor's degree	1
Ethnicity	
White British	10
Self-reported mental illness (yes)	6
Current smoking (yes)	9
First time fathers	2
Marital status	
Partner, not cohabiting	4
Married or cohabiting	6

*M (SD)

5.1.2 Thematic analysis

Four main themes were derived from the data. These were: (1) making sense of violent behaviour, (2) conceptions of fatherhood, (3) an emotional transition, and (4) breaking the cycle. A thematic map can be seen in Figure 3, which includes themes and subthemes. Quotes are used to illustrate the themes, with participant numbers used in place of names to maintain anonymity.

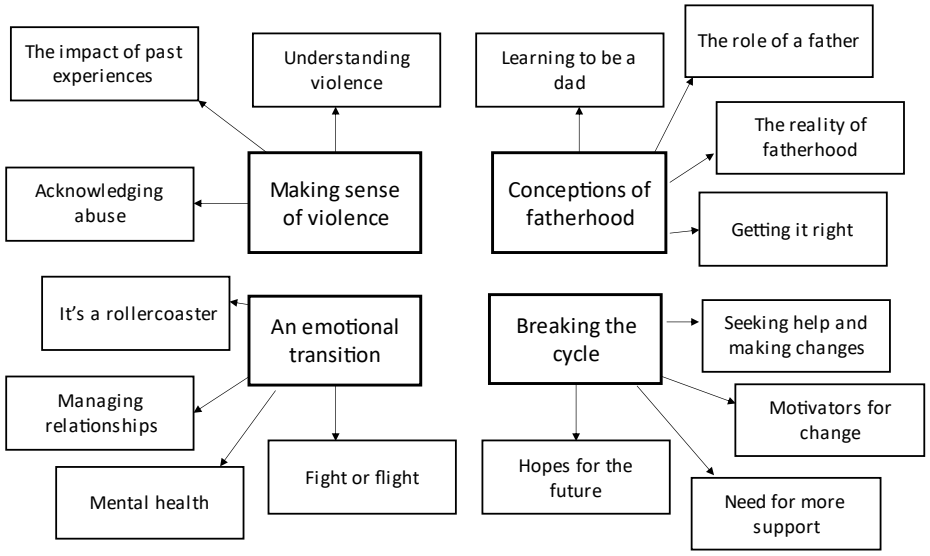


Figure 6 - Thematic map

5.1.3 Theme one: Making sense of violent behaviour

This theme captures men's understanding and beliefs about DVA. This includes their memories of violence when they were growing up, their understanding of the impact it has had on them, and how they make sense of their own abusive behaviours. The theme highlights the intergenerational nature of abuse and gives some insight into how men describe and explain violence perpetration.

5.1.3.1 The impact of past experiences

When asked about their relationship with their own father, many men spoke about difficult and traumatic early experiences, such as parental substance abuse, domestic violence, separation and divorce, parental incarceration, and being a looked after child.

Several men talked about having witnessed or been the victim of violence in the home, with some examples of severe, ongoing abuse and others describing frequent arguments.

He was horrible (participant's father). Violent. My mum told me when she was pregnant with me he put her in hospital. (05)

I got beaten as a kid, I got hurt as a child and I got thrown in my bedroom and they locked the door and I couldn't get out and stuff. (03)

Many also described absence as their main experience of their father growing up, alongside the idea that their father was not interested in them or that he was unavailable to them.

My dad doesn't know me, really. He was in and out of prison when I was younger as well, so I used to have to go and see him in prison and that. (06)

I've met him a few times before, yes, but he seemed to want to get on with his own life and have other children and stuff. (10)

Reflecting back on their parents' relationship, men had mixed views with some recalling upsetting, confusing, abusive behaviour of their father towards their mother, and others drawing on more positive memories of step-fathers' behaviour.

Confusing, it was confusing. He came back, mum took him back…and he was only there a matter of months and then he'd gone and got with another woman. (09)

He wasn't violent against me, but he was a violent person against my mum. (06)

I was brought up mainly by my step-father because my parents separated when I was two and a half. (02)

The way men spoke about these difficult experiences differed. Some dismissed incidents as normal or as no longer relevant to them.

I grew up in the age where a slipper across the backside, a belt across the backside or a slap was quite common practice. (01)

My dad wasn't around for me, so I haven't got anything to say about that. (10)

Others were very aware of the impact. Traumatic memories of their father's behaviour led several men to express feelings of anger and hatred towards their father and to not want him in their life. For some men this included attributing partial responsibility for

their own anger to their parents, while conversely others indicated beliefs that they themselves may have been partly responsible for their parents' abusive behaviour.

I don't want anything to do with my dad. I don't care. My mum brought me up. (05)

It's like, okay, I'm angry, but, like, you're part of that, do you know what I mean? You're my parents, you are part of that. You need to take some responsibility for this. (04)

They were very strict because my behaviour was awful when I was younger. (01)

Some men described how they had previously blamed their mother for the abuse she experienced, and that their mother may have blamed herself. However, most men were at a stage where they attributed responsibility for parental abuse directly to the perpetrator.

Back then, I used to blame it on my mum when I didn't see him and stuff. But now, I understand it's not her fault. He just doesn't really care. He's just like that. (06)

Men also spoke more specifically about the impact of their childhood experiences on their adult self. They made associations between parental behaviour and their own use of substances (for example, where parents had themselves been alcoholics), as well as current mental health symptoms and, for some men, their beliefs and attitudes towards women.

Every time I do drink, or if I do have a drink, I think of that past, my mum and how she is. It's a deterrent not to. (03)

I think I'd be a bit more, like, less anxious and… Because even before, all I used to do was talk to mum, because I didn't really have a man to talk to, about chats and all that. (07)

I realise now that's had a big effect in the way I was, i.e. meeting women, domestic violence. Slowly went up the same road as him, stuff like that. (05)

They spoke particularly about how their experiences had impacted on them in relation to parenting. This was often expressed as a desire to parent in a different way and to provide

things for their children which they lacked when growing up. Others noted how they lacked a role model of a father.

I would vouch that I was screaming at my mum and dad, "I'll never hit my kids, I'll never be as horrible as you," and I never have, I've never hit any of my kids. (01)

Being there I suppose, not like my father used to be, I'm trying to do the opposite. (09)

My mum brought me up... Maybe that's why I don't know a lot of how all the father-son thing works. (05)

5.1.3.2 Acknowledging abuse

Some men were able to acknowledge that they themselves had been abusive and to take some responsibility for this. This included reflecting on how they had behaved in previous relationships and also how they found themselves replicating patterns from the past in their parenting with older children.

Just taking responsibility for my actions. Not passing blame onto other people. (04)

I've stopped myself from doing it but I really would like to talk to her [ex-partner] and say sorry for some of the, she was 18 when I met her and I was horrible. She hates me, which I don't blame her. (05)

I wanted to give them what my dad didn't give to me. But, somehow, history has repeated itself and they didn't know who I was and they got told that, especially [older child], that I didn't care and I didn't want to know anything that she [his daughter] was doing. (03)

However, despite engaging with the programme, which has a particular focus on acknowledging DVA, there were also men who did not perceive themselves as abusive and others whose explanations for violent behaviour included a sense of it being out of their control.

Everyone says, "Well, he was like that so you should be the opposite." I think in your mindset sometimes you just can't control the way you are because of what you've seen in the past or whatever. (05)

5.1.3.3 Understanding violence

Throughout the discussion men touched on a number of theories about where violent behaviours come from. Some men explained how they had previously believed that violence was normal, and others associated it with using substances.

Because it is normal for me. That's what I've grown up seeing. Fights and violence and stuff like that. I'm desensitised to it now... So I'm not surprised I grew up being violent because I thought it's normal, but obviously it's not. (04)

I'd been off the drugs for about a month, a month and a half, and it just sent me loopy, a bit of a come down I suppose. (09)

In particular, men described difficulties with emotional regulation and how different emotions, such as sadness, fear and resentment, were expressed through aggression or violence. Feeling tired or stressed, which are common experiences in the perinatal period, were linked to 'sending you over the edge', while some identified frustration at not being able to express themselves as a trigger to aggression.

I think with the depression that obviously came out through aggression. I think the reason it got to that level was frustration …The lack of sleep, the tiredness and your head is all over the place. (02)

I didn't know what to say, or who to say it to, or how to express myself. So it came out in anger, me lashing out, because I was resentful of other people. (04)

Similarly, some men were aware of particular interpersonal triggers which were associated with violence, such as feeling intimidated or betrayed by others.

A lot of the domestic violence, I realise, was over feeling like you've been betrayed. Like, you know, if you were lied to about something…that would be respect gone, angry, "Why have you done that?" and domestic violence would be a part of that, maybe control. I don't know. (05)

I get intimidated quite easily. So, as a reaction, I try and become the more threatening one, you know... Not meaning to, but it's like a safety mechanism I give myself. (03)

Several men associated their emotions and behaviour with childhood experiences, although for some the associations were not fully understood, which was a confusing experience.

I've had to dig into my childhood quite a lot, which I don't want to do but I had to. Still not there yet. Still don't fully understand where it's come from. I've got a better idea, but no one's born angry, are they? (04)

Certainly, more the last 18 to 24 months I have been much more open about past experiences, about the depression, about what could have caused that from unresolved issues from childhood. (02)

5.1.4 Theme two: Conceptions of fatherhood

This theme captures men's beliefs and assumptions about what being a father means and how they go about fulfilling this role. It includes idealised views about fatherhood as well as the reality of undertaking this role, and the fear of not 'getting it right'. Despite their backgrounds, which frequently included abusive or absent fathers, men gave clear descriptions of how they thought a father should be. They were also aware of some of the things that got in the way of them achieving this, which included both external and internal forces.

5.1.4.1 Learning to be a dad

Men were asked where they learned about being a dad. There were a variety of responses, from their own parents and partners, to TV and books, to specific parenting courses.

Mainly the mother. It is, it's mainly the mother that you learn a lot from. [partner]'s a good mother. She's got good knowledge on everything. (05)

As well as these wider sources of learning, in the early stages of *For Baby's Sake*, families get input from a trained worker who provides support around their parenting. This work includes providing information about child development, as well as the use of video feedback about parenting interactions between fathers and their children to help highlight the developing relationship with the baby. Some men believed that learning to be a father

was common sense and that they just had to trust themselves to know what to do, while others recognised their lack of knowledge around parenting and were grateful for the input that they received on the programme.

I think it's common sense. That's just part of being a father. It's just on the job list of being a father, isn't it? (04)

I didn't think I was that much of a good father at the beginning but obviously seeing, working with [family practitioner] and stuff, and she does those videos, shows you what you are doing right and stuff, so, it's changed my perception on it. (06)

5.1.4.2 The role of a father

Drawing on these different sources of learning, men described their beliefs about the role of a father and gave examples of what this meant. This included ways of being available and affectionate, of teaching and communicating, and of being involved in a wider sense through relationships with other people around the child. The idea of a loving presence came across particularly strongly, with most men talking about a desire to be involved in their child's life and ensuring that their child knows they are there for them.

Just make them feel loved. Feel like they do belong here. They are safe and happy, fed and watered. They can talk to me if they need to. That's basically it. (04)

I think it's very important to be as affectionate with your children and as close to your children as you can (01).

Men also spoke about ways to communicate with and teach their children, including being a role model and balancing discipline with affection. They recognised the importance of this for building a strong relationship with the child.

Whereas, with me I'll sing to my kids and I'll cuddle my kids, for me you can give somebody all the strictness in the world, that's great, but if you're not going to balance it there's no point. (01)

It's just being there for them, you know, loving and caring. Just being a good role model, I suppose. (03)

Some men talked about the wider aspects of parenting, such as getting involved with the practical side of childcare, providing support to the mother, and getting to know their children's friends.

I suppose knowing other dads and really engaging with it, really engaging with the fact that you are a father means that you're making friends with your children's friends' parents. (08)

I tried to help when I could, like sterilising the bottles and cleaning, and stuff like that, and helping her with getting the bath and helping her do the baths (06).

Many of the ideas expressed were rather idealised ways of being a father and reflected the ways that men hoped to parent and believed to be good parenting. They were also asked specifically about concepts of an 'ideal' dad. This brought up very similar ideas around availability, love and teaching, as well as the concept of being able to put the child's needs ahead of your own. For some, this contrasted sharply with the ways they had been parented themselves.

Raising a child to be the best you can be, when you're not even at your best, maybe. (04)

Just as a good person, you know, someone that's always there and trying to help them when they need it. My outlook on being a dad was always in the back of my head I never want to be like my real dad. (03)

When men were asked about the best things about being a dad, many spoke about simple moments of connection, seeing their baby smile or laugh. This simplicity contrasted with the complex ways that they were involved in their children's lives.

You can be having a bad day and just seeing the little one laugh or smile at something suddenly that bad day is gone (02)

5.1.4.3 The reality of fatherhood

Alongside these views about good fathering, men described perceived barriers that they face when trying to be a good dad. Sometimes this involved the system around them, for example, being excluded by maternity services, not having enough paternity leave, or not

being allowed unsupervised contact when social services were involved due to abusive behaviour.

It's a system [paternity leave] that works in mums' favours and … the importance of mums rather than the importance of dads… The thing is it doesn't make mums any less important by balancing it, it just brings dads up to the same level. So society has got a long way to come when it comes to dads. (01)

I have to be with [partner] and the baby either in public, or I have to be supervised in a private place... But yes, we go to the park and go down town and that, so I can spend time…So I've been trying to do it as much as I can recently. (06)

Others, reflecting on their relationships with older children, spoke of a tendency to be pulled into unhelpful behaviour patterns due to traumatic pasts and the lack of role models that they had for being a good father. The challenge of trying to teach someone to manage emotions that they themselves struggled to manage was also a problem.

Like, where I wanted to be that good person, I wanted to be that good dad, but it was like something was holding onto me and pulling me backwards. I couldn't do it. (03)

Didn't really understand how to express myself, but I had to teach someone how to express themselves. (04)

Several men expressed the idea that women have a 'maternal instinct' that they themselves don't have. This involved women being more in tune with the baby, knowing what to do and what a baby needs, and having a natural tendency to care for an infant. This impacted on behaviour in terms of mums being expected to take on more childcare duties.

[Baby]'s mum, sort of, they just know, don't they? I don't know how, they just do. Mother's instinct. (04)

Mums have an intuition more than dads do, they're more in tune with that baby, they've had that physical bond where they've carried that baby. (01)

It's just a natural thing for them to look after their baby. (05)

5.1.4.4 Getting it right

Men spoke about their fears around 'getting it wrong' as a dad. As one man put it:

Nobody wants to fail as a parent, and that link between not always getting it right and failure isn't identified when you've got a new born and your first child; people don't understand that you're going to get it wrong, so in your head you've failed. (01).

For some the uncertainty and perceived lack of knowledge impacted on their level of involvement with their child. For others the need to support their child emotionally highlighted their own deficits in understanding their emotions.

Yes. I sort of want to get involved, but it's just, I'm sort of afraid of doing something wrong. (07)

Didn't really understand how to express myself, but I had to teach someone how to express themselves. (04)

Even for experienced dads, perceived failures with older children created worry about repeating mistakes. However, this also provided motivation to do things differently this time.

But, it's still the what ifs and what if I don't do right? You know, what if I don't become a good dad again? What if I mess up again with my third child? … I wanted to give them what my dad didn't give to me. (03)

Well, because I've got a lot of guilt with my other children. My daughter, she was brought up in the care system, not just due to me, due to her mum. I wasn't stable, I was in and out of prison all the time and stuff like that. (05)

Men expressed frustration at having to deal with others' expectations or judgements, particularly those outside the family. These pressures came from a range of sources, including social services, parents-in-law, and more generally from a perceived expectation that men have to be 'superman'. For some this impacted on their ability to enjoy the pregnancy. Some men described how men's role is undervalued despite having

to juggle many demands, and that where they are trying to make positive changes in themselves or their relationships, this takes time and can't happen 'overnight'.

I think that put a lot of pressure on it. So the happiness was a bit of, "Oh, what's going to happen? We're going to have these people [social services]..." So it's not really a normal situation to be in, so it has put a lot of pressure on it. (05)

Well, there is some stuff I'm still doing wrong. I'm obviously still smoking and stuff like that. But I'm still trying to see my daughter as much as I can, and stuff like that, and trying to be there as much as I can, and help her. (06)

5.1.5 Theme three: An emotional transition

This theme further expands on what men described in terms of challenges across the transition to fatherhood. Key issues arose around managing changing relationships and dealing with mental health difficulties.

5.1.5.1 It's a rollercoaster: Emotional ups and downs

Overall, men described the rollercoaster of emotions that having a baby brings, from fear and worry to joy and happiness. For many men in the sample, the pregnancy was unplanned and unexpected. Therefore, the moment when men discovered they were going to be a father was a particularly emotional moment and brought a range of reactions. Men explained these emotions in different ways. For some, worry arose out of uncertainty about the future, for example, whether they would be able to meet the baby's needs and, in the case of unstable relationships with the mother, whether they would be involved. Others felt the weight of responsibility and described the shock of finding out.

I was just scared at first, because I didn't know what to do…I don't know. Just having more responsibility, sort of thing, I think. (06)

Obviously becoming a dad's quite stressful, for the first time. Don't know what's going to happen. Don't know if the baby is going to be okay. (04)

You're worried about finances, you start to question yourself as a person, "Am I going to be able to meet all of the baby's needs?" I think, and obviously I can only speak for

me, but the fear and anxiety of lack of involvement… Feeling left out and feeling like you're not an important part of that process (01)

Some men had previous experiences of perinatal loss or pregnancy complications which created worry in the current pregnancy. They noted how this could impact on the relationship with their partner, sometimes in a positive way due to them bringing knowledge and experience to the situation, but more often this caused tensions due to increased worry.

The main worry was something wrong, were we going to lose the little one before we really had a chance to know anything. I would say that was probably the main worry was obviously about the loss or potential loss. (02)

The shift in the relationship with the mother that having a baby would bring was a feature of many men's narratives. While this was sometimes expressed as fear due to the connection that a baby would bring, many men described feeling happy to be having a baby with their partner.

If you're with someone and there are no children you can both go your separate ways. The minute you know a life's coming into it, it puts the relationship [with the partner] in a whole different perspective (01)

I was happy, I was ecstatic…I don't know, I just wanted another child, I wanted a child with the woman that I love. (09)

5.1.5.2 Managing the relationship

All ten men were in a relationship with the mother of the baby at the time of interview, and six were cohabiting. Men were asked about the ways that the transition to parenthood impacted on their relationship with their partner. They discussed both challenges and strengths in the relationship, although, notably, they did not discuss this in terms of abuse.

The changing family dynamics and the focus on the baby could leave men feeling rejected or inadequate. Men spoke about worries that they wouldn't be 'good enough' for their partner and wanting to be able to do more but finding this hard due to lack of knowledge.

Others noted that the attention they gave their baby could also leave their partners feeling rejected, and some men reflected that the focus on the baby could be used to take the spotlight away from a strained relationship.

On her side, I can probably see all I go on about is [baby]. Maybe in her head she's thinking, "Is that all he's bothered about?" (05)

It's an easy thing for us to do to focus on the children and not each other and we're here to support in practical and physical ways, each other, but possibly not emotionally. (08)

The quality of communication with their partner was talked about extensively. Some men described how poor communication exacerbated difficulties, leading to frustration and misunderstandings. Many men spoke about increased arguments with their partner across the perinatal period, although they did not link this specifically to abuse. Explanations for this included worry about being prepared, poor sleep, men drinking more or spending more time at work, and differences in parenting styles. Some felt that the arguments impacted on their relationship with the baby.

One of those issues was down to communication, so I think there was a huge lack of communication at that time. I think we both had fears and worries, but didn't really discuss that with each other. (02)

It's just, because we argue, I don't want to then go and pick [baby] up, and then she starts getting mad at me. (07)

Where both partners had traumatic histories, this was perceived as both a good and bad thing. On the one hand there was an idea that it may help to understand each other so that partners feel understood and not judged. On the other hand, it could be seen as a 'bad mix', leading to increased social services involvement, which is an additional stressor.

I've been judged about a lot of things in my life, people having false opinions of me and stuff like that and they don't actually know me and it's nice to have someone that doesn't judge you and that's why me and [current partner] get on so well, because we don't judge each other. (03)

They can have issues, you can have issues, whether it be drink, drugs, violence, and it can be a bad mix. (05)

Partners' communication could sometimes be seen as confusing and unsettling. This included instances where partners' moods were perceived as unpredictable and changeable, and one man worried that his partner's communications may not be reliable as they were coloured by her past experiences.

Even though I'm doing what she's asking me to do, sometimes, because she's a broken woman, she might not want that. Does that make sense? (05)

I'd come in from work and she'd give me a cuddle and go, "Alright," and be talking to me and then all of a sudden she was like (clicks fingers) and turned into somebody else and it was, "Oh, what's the matter with you?" Again, she'd be five to ten minutes and then she'd be back to normal. (09)

Several men reflected on the need for good communication at this time and described how conversations had helped them to resolve difficulties. Some men felt that they become closer to their partner across the perinatal period due to talking to each other more and supporting each other through a difficult time. This had strengthened the relationship and created a 'good bond'.

Others spoke about their efforts to support their partner and 'take the strain' off her, by helping with practical duties or 'holding it together' through difficult times.

For me personally it was quite scary [witnessing a difficult birth]. I was trying to hold it together without letting on too much to my partner as to what was going on. (02)

And, even when we got back here, I had to, as hard as it was, be the strong one, because [current partner] couldn't come out of the bedroom for the first week. (03)

For those where the relationship was not stable, there were reflections on how separation as a couple would impact on parenting and time spent with the child. This included thinking about the need to distinguish between the co-parent relationship and the couple relationship in order to fulfil the role of a father, but also acknowledging the fact that fathers may have less time with the child following a separation.

So if you love somebody and they don't love you back anymore or things are not in a good place for either of you it's important to make sure that baby and parenting your baby is separate because otherwise that's when a lot of dads miss out. (01)

If you have struggles in your relationship, and your relationship ends, you don't have to see each other ever again if you don't want to. When you've got children, you do, so you have to put all your feelings aside and you have to come back and still be a dad. (04)

5.1.5.3 Mental health

Talk about mental health permeated many of the discussions, both in relation to becoming a father and also in relation to violent behaviour.

Several men spoke about dealing with partners who were depressed and the challenges of this. They noted how postnatal depression not only had a negative impact on the woman's own wellbeing, but also on the couple relationship and the relationship with children. Some men described how difficult it is to know how to support someone who is depressed. There was a feeling of this being part of their role, but not having the information or skills to know how to do it.

I think that's definitely having an effect on our relationship, because it's difficult to be in a relationship with someone who is quite obviously very, very sad, and very anxious and depressed…I don't want her to be like that so it's frustrating for me because I can't take it away. (08)

I think it was a lack of understanding about postnatal depression and a lack of support for both parents. I don't know what I'm looking for, I'm not a mental health doctor… I've just seen she's had a baby and she's just very, very low. (01)

As described above, several men in the sample also reported their own symptoms of depression and anxiety. Other men reported experiencing symptoms of post-traumatic stress, struggling with ADHD, and ongoing management of psychotic symptoms.

Across the transition to parenthood, men described a variety of stressors which could lead to worry and negativity. Sometimes these were simply described as challenges, but often

they linked these directly to symptoms of poor mental health. The 'emotional rollercoaster', was a particular feature, with feelings of rejection, jealousy, fear and worry being cited as contributors to low mood and depression. In light of their trauma histories, poor experiences of being parented, and past/current mental health disorders, these stressors could be hard to overcome.

I know that I can do everything, but I panic, whether it'll be worrying about his safety with, like, what if he falls? What if I'm not there? It was 101 different things going through my mind, knowing full well that I know that I can do it, but in the back of my mind, just, "What if he starts crying? You're just going to panic," and that's what I do. (03)

The lack of sleep, the tiredness and your head is all over the place. Then you start to get frustrated with the tiniest little things. (02)

Several men spoke specifically about their mental health difficulties and how these were expressed in the perinatal period, including childhood memories of poor parenting being triggered by becoming a father, anxiety being exacerbated over not knowing how to care for a baby, and having to manage conditions such as ADHD as a parent.

I go through flashbacks and reminisce a lot about the past and stuff like that… it's played a key factor in my mental problem, which I do take Sertraline for. And, it has helped, but it's still the thoughts in the head and things that they've [my parents] done I don't want my kids going through. (03)

He [GP] said what he thought had happened is that a lot of issues and bits and pieces that I hadn't dealt with from my childhood may have resurfaced given the birth of my son. It is like, "Okay, I am a dad now. I want to do this, this and this. Why do I feel like that was never done for me when I was younger?" (02)

I sort of want to get involved, but it's just, I'm sort of afraid of doing something wrong. So, yes, I just… I don't know. I've got anxiety, so… Might just be a thing. (07)

5.1.5.4 Fight or flight

Men spoke about different ways that they managed the challenges of fatherhood and their increasing understanding that many of their coping strategies could be unhelpful. One man described how having a baby can elicit a fight or flight response, with fathers having to choose to run away or stay and work through it. This idea of the threat system being activated was also noted in others' accounts, where men spoke about fear and panic being reactions to changing life circumstances. A common strategy to cope with this was through numbing and avoidance of emotion; this included the use of substances, disengaging from the relationship with the partner, and using work or other activities to avoid the situation.

I think partly it [alcohol] was to do with escaping and sort of it's a painkiller I guess, partly it was a way of disassociating me from the situation or bringing myself out of the situation because there is that numbness that comes with it. (08)

So sometimes ignoring it, sometimes not really taking part in the relationship, so letting things fall by the wayside, certainly being more selfish, drinking more and ignoring certain things that should be attended to. I suppose just disengaging is a good word to describe it. (02)

Others described becoming defensive and using aggression as a response to fear or perceived threat.

It's easy to jump straight back to that defensive mode where you're panicking. It can be something innocent but then when you talk to them [partner] you're angry at them and they can't understand why. (01)

I didn't know how to express my emotions very well, so, I would lash out. Break stuff, shout, that kind of thing. (04)

5.1.6 Theme four: Breaking the cycle

This theme is about seeking help, making changes, and looking to the future. It captures men's understanding about aspects of their behaviour that they need to change, how they

are going about doing this, and their hopes for the future, as well as men's thoughts about what might be helpful to better support new fathers.

5.1.6.1 Seeking help and making changes

Most men recognised that some of their coping strategies had exacerbated the situation and were problematic. Prior to working with *For Baby's Sake*, many had sought and received help for mental health difficulties and violent behaviour from a variety of sources, including work colleagues, friends, family members and professionals.

I was arrested on suspicion of common assault, but charges were never brought against me on that particular case. The following day I did then make a GP appointment to go down and say, "Something is not right because this happened and it can't happen". (02)

I've got a couple of good friends, which they support me and they help me. (03)

For some, previous participation in domestic violence perpetrator programmes had been useful.

My third born there have been no incidents due to the fact that obviously I have been on various programmes. (02)

I did a course with probation called 'Think First' and it was a really intense course. That's when I turned my life around, after I did that. (05)

5.1.6.2 Becoming a father – motivator for change

Men spoke about the process of change and what has been useful to them in doing things differently. This began with an acknowledgement of unhelpful past behaviours, as described above. But for most men, the key motivator for change was fatherhood. Having had poor experiences in their own childhoods, there was a strong desire to provide something different for their children. For some, this was a general sense of building a good relationship with their child, while others identified specific things that they wanted to do differently with their children.

I just want him [child] to have a better relationship with his dad than what I had with mine, really. Because even though you think it doesn't affect you, it affects you quite badly, really, if that makes sense. (05)

Not a sense of belonging. That's, I think, where my anger comes from, but in turn that's helped me make my kids feel like they belong so they don't develop any anger issues. (04)

In relation to violence, following an acknowledgement of the need for change, some men were able to identify specific things that they were working on or that they had done to move forwards, for example understanding their triggers, being able to regulate their emotions better, and choosing different behaviours.

I have done a lot of learning about myself, my behaviours, what sorts of triggers, the trigger points and bits and pieces. (02)

Understanding where it comes from and controlling it while you're at the peak of anger. When you're really angry, you've still got to control yourself. (04)

Just thinking before I act, for starters…Like now, for instance, we're on a cooling down period. Normally, I would be bombarding her with texts, I would have gone round there. I've had to think to myself, "Right, no. Do it right. Don't do all that sort of stuff," so you have to just think. (05)

They attributed many of these changes to the help they had received from For Baby's Sake and spoke about some of the mechanisms which contributed to this, including a feeling of being understood and getting support with parenting.

It helped and he has been a massive help for me, just that hour, we'll have a chat and stuff. It's just a release talking to someone else that can understand and understands me. (03)

I didn't think I was that much of a good father at the beginning but obviously seeing, working with [infant practitioner] and stuff, and she does those videos, shows you what you are doing right and stuff, so, it's changed my perception on it. (04)

5.1.6.3 Need for more support

Beyond the support they were receiving from *For Baby's Sake*, men reflected on what they thought would have been helpful for them in the transition to fatherhood. This included improved antenatal education to prepare parents for the significant changes to their lifestyle and relationships, and information about child development.

I think they should do that for new fathers, that would be helpful. How to feed, how to change, learn the difference between the cries. Yes, telling us about the thing with the ups and downs, the hormone imbalance, because it might shock some people. (09)

However, some also noted the barriers to help-seeking, for example feeling that they are not legitimate users of services at this time, or a sense that this it wouldn't be seen as normal behaviour for men to ask for help.

In reality, everyone has their ups and downs and a lot of men probably wouldn't come forward and ask for help. They wouldn't say, "Look, I'm really struggling here with this baby thing. I need some help. (05)

Yes, it's not recognised [depression] because they don't offer support for dads. "If you get postnatal depression or prenatal depression come and see your midwife," and dad is sat there thinking, "It's unfair and it's wrong that I'm feeling like this, it's selfish," because they don't offer help for the dads (01)

5.1.6.4 Hopes for the future

Men were asked about the future and the sorts of things they wanted for their children. This was another opportunity for men to express how much they wanted their children to have a different upbringing and experience to the one they had had.

Some men spoke about worries for the future, about how they hoped they could protect their children from the things they had experienced.

You want to protect your children from everything and sometimes you can over worry yourself and you can go the other way and isolate your child, "Oh, no, you can't do this, you can't do that, be careful of this, be careful". (01)

Others talked about ensuring their children have their material needs met, while others spoke about how they hoped the father-child relationship would be in the future. In particular, the hopes of many men focused on wanting what they saw as a normal family life.

I just feel that he needs a good start in life, really, and to see that his mum and dad are there all the time if he needs to talk or anything. A lot of problems in families is communication, lack of it and it's a very lonely place if you haven't got a mum or dad when you're younger to talk to. (05)

Like telling me stuff and drawing me pictures and stuff like that. Just anything, like a usual kid would do. I just want to go to the park and stuff like that. Anything like that. (06)

5.2 Discussion

This study is the first of its kind to elicit detailed first-hand accounts of the experiences and views of men who use violence in their intimate relationships at the time of becoming a father. The men in this study had a strong, positive concept of what a father is and the ways in which fathers should be involved in their children's lives. They were able to reflect on the challenges of fulfilling this role and were aware of the discrepancy between the idealised view of a father figure and what they were able to provide for their children. In relation to abusive behaviours, men had started to make sense of the ways in which their adverse childhood experiences were impacting on their adult behaviour and reported a strong desire to provide different experiences for their own children. In relation to this, they described some of the ways they were beginning to make changes and what had helped them to do so, providing useful indications of the kind of support that may be needed to help families break the cycle of domestic violence.

The men in this study were engaged in a programme which has a specific focus on parenting and also on abusive relationships. Therefore, these men were familiar with talking about and reflecting on their experiences, and those who had been on the programme for some time would likely already have had some of their beliefs and behaviours around their use of violence challenged by practitioners. It is an indication of

the usefulness of the programme that many men were comfortable talking about their deficits in parenting and acknowledging abusive behaviours, something which some other studies have noted is difficult to do (Perel & Peled, 2008). Similarly, the fact that they had chosen to sign up and engage with the programme indicates that they were at a stage in their lives where they were willing to acknowledge the need for change or support, although this did not always include acknowledging abusive behaviour. The data therefore provides a unique insight into the ways in which men who are at a transition point in their lives make sense of their experiences and talk about change.

This study identified four key themes in relation to the views and experiences of parenting among men who use violence in their intimate relationships. These themes are discussed in more detail here, before considering some of the strengths and limitations of the study.

5.2.1.1 Making sense of violent behaviour

Research on ACEs (Hughes et al., 2017) reveals strong associations between early childhood trauma and subsequent victimisation and perpetration of interpersonal abuse. There are a number of potential explanations for the association between ACEs and adult perpetration, including social learning theory (e.g. the modelling and normalisation of violence), neurobiological impacts of early trauma leading to poor problem-solving and emotional dysregulation, and the mediating role of mental health disorders such as PTSD, depression and anxiety (Delsol & Margolin, 2004; Kar, 2018).

Different levels of explanation were expressed in this sample. Several men thought that violent and aggressive behaviour was ‘normal’ due to witnessing it as a child and one man spoke explicitly about the impact of his upbringing on his views towards women.

Some men did not report witnessing violence in the home when they were children but instead described their primary experience of their own father as absence, either physically or emotionally. This included not being listened to, not having a sense of belonging, and feeling that their father did not know them. Van der Kolk (Van der Kolk, 2014) describes the importance of a sense of being known or seen by a parent, of needing a feeling of belonging and approval, and of being heard and taken into account. Not having this can undermine a person’s sense of self-worth and safety, and lead to mental

health problems. Whether due to violence or absence, the fact that many of the sample did not experience a consistent, containing attachment relationship may have resulted in an impaired ability to understand and manage their own emotions.

Indeed, several men touched on experiencing emotional dysregulation in terms of finding it hard to deal with sadness or frustration and this tipping over into violence. Berke et al (Berke, Reidy, Gentile, & Zeichner, 2016) describe how poor emotional literacy and regulation may mediate the relationship between stress and perpetration of DVA. Men who struggle to identify or accept certain emotions, especially those which are not considered to be typically masculine, such as sadness and fear, and who are unable to access effective strategies for regulating emotions, may be more likely to perpetrate violence against their intimate partner.

Particularly interesting to note were those who identified more complex interpersonal experiences as triggers to aggression i.e. betrayal and intimidation. This suggested a sense of being out of control or threatened and needing to regain control in the relationship. This is an important insight for men to make. While this insight alone is unlikely to be sufficient for behaviour change, these insights alongside other aspects of the programme, such as teaching specific anger management tools (e.g. time out, steps to anger), may have the potential to reduce aggressive behaviour in the face of perceived interpersonal threat, thus providing an opportunity for different outcomes and experiences (Kelly & Westmarland, 2015).

Being on the programme suggests that these men had some awareness of their damaging behaviours and for some, perhaps, were at a stage of life where they were willing to acknowledge violence and take steps towards change. However, this process takes time and, at the time of interview, men in this sample were still in the first year of the programme. Several expressed ongoing anger at their own parents while others dismissed their early experiences as unimportant. Despite this, some men already noted that they had previously seen violence as normal but were now learning that this is not the case and others could identify the ways that their experiences of being parented impacted on them. However, others were not yet at this stage and were reluctant to think about the past, or else used past experiences to explain current behaviour without an accompanying acknowledgement of their own responsibility.

5.2.1.2 Conceptions of fatherhood

Many of the men in the sample did not have a good role model from which to learn about being a father - their fathers were either abusive or absent. However, they drew on learning from other sources and were able to describe what a positive father figure is, despite not having experienced it themselves. In this way, they knew what they were aspiring to, and at times they were painfully aware of the discrepancy between this and what they were able to provide.

Within the theme 'conceptions of fatherhood' men described their idea of what a father is and the different ways they were involved in their child's life. Pleck's model of father involvement (Pleck, 2010) includes five components: direct positive engagement activities (e.g. playing games and reading); warmth and responsiveness; control (e.g. monitoring the child's whereabouts and limit-setting); indirect care (e.g. buying things for the child, arranging playdates etc); and process responsibility (e.g. making sure other needs are met). These different components were all expressed across the narratives, with men indicating an awareness of the importance of these different components. In this way, their expectations and experiences of the role of a father do not appear different to that of men from other, non-abusive samples.

Previous research on violent men's talk about fathering has highlighted control and discipline as a particular feature, with men described as strict and authoritarian (Perel & Peled, 2008; Veteläinen, Grönholm, & Holma, 2013). Men in the current study, who were still in the early postnatal months, did not appear to identify with this and instead narratives were more focused around availability and connection. This may reflect society's changing conceptions of fatherhood; as family structures evolve and women working has become the norm, there is more expectation for men to be involved and present in their children's lives compared to 50 years ago. However, these differences may also be due to the age of the children which men are fathering. The fathers in this sample were still in the first postnatal year and, therefore, many of their descriptions involve idealised views of how they hope to be involved and may or may not reflect how they go on to parent as their children get older. Indeed, the tension between the idealised view and the reality of fatherhood is noted in other research with violent fathers who have older children (Perel & Peled, 2008).

This suggests that intervening early and providing advice about parenting, especially sensitive discipline, may be important to harness the desire that men have to parent well and give them skills to manage their children's behaviour in helpful ways. Some of the men in this study benefited from the use of video interaction guidance during the early months of the child's life and gave positive feedback about this intervention. Therefore, where men continue to have contact with their children, a similar format of intervention may be beneficial for when their children are a little older (e.g. Video Feedback for Positive Parenting and Sensitive Discipline (VIPP-SD; Juffer, Struis, Werner, & Bakermans-Kranenburg, 2017)). The use of such targeted interventions may help to translate the early desire that men have to connect with their infants into tangible behaviours beyond the perinatal period.

5.2.1.3 An emotional transition

Many of the challenges in the transition to parenthood that the men in this study described overlap with those in the literature from other samples. However, most of the men in this sample had traumatic childhoods with poor attachments, absent fathers, and a lack of support to develop emotional regulation. Their narratives highlight the ways in which adverse childhood experiences can shape adult perceptions, expectations and behaviours in ways that make the transition to parenthood particularly challenging. Adults who have been exposed to early interpersonal trauma as children may have deficits in problem-solving, in detecting and responding appropriately to facial expressions, in regulating their emotions effectively and in inhibiting behaviour (Kar, 2018). In the transition to parenthood these difficulties may be compounded by stress and lack of sleep. For many of the men in this study, both they and their partner had experienced early trauma and were trying to navigate the 'rollercoaster of emotions' and changing relationships that having a baby entails. This is highlighted in men's narratives as they talk about fear, frustration and uncertainty. It is also evident in the high rates of mental health difficulties disclosed by the men in the sample and similarly high rates in their partners.

The 'rollercoaster of emotions' expressed by many men can bring particular challenges for those with poor emotional regulation. Small frustrations or misunderstandings can lead to disproportionate responses, including avoidance and aggression. Impairments in

men's emotional literacy and regulation are hypothesised to be partially a consequence of masculine socialisation, and are implicated in the development of psychopathology and also in the perpetration of DVA (Berke et al., 2018). Masculine socialisation encourages boys to avoid displays of vulnerable emotions, such as fear and sadness, leading to a lack of opportunities for learning about how to identify and express these emotions; this socialisation may also reward externalising emotions such as aggression and anger (Chaplin, Cole, & Zahn-Waxler, 2005). Indeed, research indicates that men have greater difficulty putting words on feelings than women (Levant, Hall, Williams, & Hasan, 2009). Additionally, men may internalise beliefs and stereotypes about masculinity, including what are acceptable emotions to express, and how these should be displayed. This can lead to restrictions in emotional expression, including avoidance, denial and suppression, as well as a greater likelihood of 'typical' masculine expressions of emotion such as aggression, dominance and control (Berke et al., 2018). These restrictions have been linked to increased psychopathology in men.

Restricting emotional expression also has implications for emotional regulation, which may be an additional mediator between internalisation of and adherence to masculine norms and psychopathology. Good emotional regulation includes the ability to identify the emotion you are experiencing, accept it, and employ a flexible range of strategies to regulate depending on the context and environment. In contrast, inhibition and avoidance predict dysregulated emotions, for example, increased physiological arousal and subjective distress. This can also lead to the use of maladaptive coping strategies such as alcohol or substance use (Spendelow, 2015b).

A good support system is important to manage this – having trusted others to talk to and to discuss worries with can help to normalise some of the fears and frustrations and find ways to problem-solve and reduce stress (Bäckström et al., 2020). In the context of a good therapeutic relationship, men can learn to recognise and label their emotions, and develop more adaptive coping strategies. However, many of the families in this sample had poor relationships with their own parents, a distrust of support services, and a history of volatile relationships with their partner, leading to a lack of support which could feel overwhelming and isolating. This indicates the need for support which is consistent and

available across the perinatal period, and robust enough to overcome negative perceptions of services which men may be carrying.

Challenges in the transition to parenthood are also reflected in the subtheme ‘Getting it right’, where men express hesitancy due to past failures, and an awareness of having got it ‘wrong’ before. Many had older children who they did not live with and in some cases did not have contact with. Several expressed guilt over these relationships. Their experience of positive interpersonal connections may be few and far between and so they express nervousness about this new opportunity to create a connection. This is in the context of worries about being judged negatively by the system that they are in and their efforts to change perhaps not being seen as good enough or fast enough. Indeed, this may be the case. Babies’ brains develop rapidly in the first two years of life and they are exquisitely attuned to the emotional environment in which they are cared for. Therefore, the pace of change of parents who are trying to overcome their own early traumas may be at odds with the emotional needs of the infant (Cuthbert, Rayns, & Stanley, 2011). This highlights the need for interventions which begin in pregnancy and provide intensive support for new parents, providing them with support for their own emotional wellbeing as well as specific parenting interventions to meet the developmental and emotional needs of the baby.

Challenges in the relationship with their partner were generally not perceived as a reason not to have a baby. Despite many of the men describing unplanned pregnancies, most were pleased to be becoming a father. Other qualitative research (e.g. Baldwin et al., 2018) highlights the positive reactions of men to discovering they are going to be a father, often related to feeling more ‘like a man’. That was not specifically expressed here, but instead happiness arose from the connection with the partner. This was generally expressed by men who had older children, often with other partners, and so seemed to be connected with a belief in a better future and a new start with the creation of a new family. The hopefulness and optimism for the future underscores how new fatherhood can be a motivator for change and how interventions can harness this motivation by including a focus on parenting.

However, men also spoke extensively about challenges in communication which could lead to misunderstandings and arguments. A focus on the couple relationship during the

transition to parenthood has been highlighted as a key target for interventions seeking to improve family outcomes (Feinberg et al., 2016). Acknowledging the fact that the partner relationship has changed and considering which aspects are permanent or temporary, and supporting the development of good communication patterns, may be helpful in reducing stress in the relationship.

5.2.1.4 Breaking the cycle

The unhelpful coping strategies that men described using in response to the stress of becoming a father are similar to those identified in other literature on men's mental health i.e. withdrawal/avoidance or aggression. These responses can be understood as reactions to a sense of threat within a fight-flight model. Highlighting and labelling these behaviours as coping strategies and being able to identify the situations that give rise to them seemed to be helpful in allowing men to acknowledge problematic patterns. This may help to reduce shame around some behaviours and provide psychoeducation about the links between thoughts, feeling, behaviours and physiological states. For these men it was also helpful to begin to take steps towards change.

The need for more support for new and expectant fathers also echoes the wider literature on paternal mental health, with a call for more antenatal education to prepare parents for the upcoming changes and better information for fathers about infant development (May & Fletcher, 2013). This may help to reduce overall stress levels, allowing parents to manage the transition more effectively. Furthermore, the barriers to help-seeking that men in this study described, such as the stigma of asking for help, has also been noted elsewhere. Other qualitative studies added issues around finding the time to access support and the fact that it may be inconvenient for new parents. Men in this study were visited at home by their practitioners, perhaps helping to reduce these barriers. As reported in the discussion of Study 2 (systematic review), several authors have suggested the use of online formats as a way to reach fathers and overcome some of the barriers around access. This fits with the way that many parents are already seeking information (Da Costa et al., 2017).

Consistent, non-judgemental support over a period of time can help to regulate emotional responses and provide a holding environment in which men can feel safe enough to

explore their experiences, including acknowledging the impact of traumatic pasts on current behaviour and reflecting on the way they manage relationships (Wallin, 2007). This kind of support may help to provide a different kind of emotional environment for the baby, allowing men to translate their desire for a better start for their baby into tangible behavioural outcomes.

However, to break the cycle of intergenerational trauma, fathers need not only to have better relationships with their children; they also need to stop abuse towards their partners. While intimate partner violence was not the topic of the discussions in this study, this nevertheless formed the backdrop of the research. The philosophy of *For Baby's Sake* is to take a trauma-informed approach to working with perpetrators, acknowledging their own histories of trauma and the necessity to process this for change to take place. This comes through in the narratives of the participants in this study, who described their childhood experiences and the ways that these have impacted on them as adults and parents. However, there is also a need to acknowledge and bring to the fore the social and historical context of violence against women, so that the experience of victims is not invisible. Men's narratives about their relationship with their partners were largely about wanting to overcome difficulties, provide support and maintain the relationship. Some men acknowledged previous abuse towards their partners and expressed guilt and remorse for this, while others had not acknowledged this at this stage of the programme.

Unlike some other programmes, *For Baby's Sake* will work with co-parents whether they stay together as a couple or not. Many men were in a process of attempting to improve their relationship with the partner and were gaining support from the practitioners to help them understand their partner's perspective and improve communication. The aim of the programme is to support men to take responsibility for their actions and to acknowledge the ways that their behaviour is abusive. While some men in the sample had been able to do this within the early stages of the programme, others had not achieved this at the time of interview.

5.2.2 Strengths and limitations of the study

To my knowledge, this is the first study to interview fathers who are violent in the perinatal period about their experiences and views of parenting. This data therefore makes

an important contribution to understanding the motivations, beliefs and experiences of this group, in particular in relation to the impact of becoming a father.

This sample captured some of the complexity in the lives of perpetrators; men had experienced multiple traumas in their lives, had a range of mental health disorders, and included both first time fathers and those who had several older children within previous abusive relationships. The men in this sample had engaged with and were undertaking a perinatal programme to reduce violence and were therefore at a point in their lives where they were willing to acknowledge the need for change and take steps towards this. This helped to draw out narratives about motivation for change and the facilitators and barriers to such changes. However, it should be noted that other men with similar backgrounds and experiences who are not at this stage of change may have very different perspectives. Similarly, there was little ethnic and cultural diversity in this sample and therefore the findings are not likely to be applicable to men from culturally diverse backgrounds. The experiences and perspectives of men from other backgrounds would be usefully explored in future research as views about women and family are likely to differ.

In terms of methodological limitations, inter-rater agreement on the coding of a sample of the transcripts highlighted some discrepancies. This was largely due to the two coders using different language to label the codes rather than differences in what to code. This led to some useful discussions about how to describe the data, and all discrepancies were resolved. Additionally, it is important to note that, within this sample, saturation was not reached on several of the themes. However, the findings highlight the range of experiences that men have and underlines the need for an individualised approach when working with families in order to ensure practitioners can target the specific beliefs and behaviours that are problematic within each family.

Two further limitations are worth noting. Firstly, this is a cross-sectional study and therefore the outcomes of the men in this sample in terms of their ongoing engagement with the programme and their relationships with their partners and babies are not captured here. While the data indicates a desire for change and connection, it is not known if these men were able to achieve this over time. Secondly, the focus of this study was on fatherhood and exploring ways to ‘break the cycle’ of intergenerational risk to children. Therefore, while the study explored some of men’s understanding about their abusive

behaviour, it did not capture detailed views about using abuse in current relationships. This data could usefully add to understanding about ways to prevent further abusive behaviour.

5.3 Conclusion

A qualitative approach to exploring new fathers' experiences while they are taking part in a perinatal programme to reduce violence allows the voices and views of male perpetrators to be better understood. The data from this study provides a unique insight into the ways in which men who are at a transition point in their lives make sense of their experiences and talk about change.

Understanding the perspectives of fathers who perpetrate DVA is essential to find ways to engage men in interventions which can help improve outcomes for themselves, their partners and their children. For example, focusing on fatherhood, providing men with an opportunity to overcome past mistakes, and harnessing the desire to improve relationships were all important motivators for the men in this study. Indeed, the data presented here capture men's strong desire for change and their growing understanding about what impacts on their emotions and behaviour. The traumatic backgrounds, mental health difficulties, and varied family structures of the sample highlight the complex factors that interventions need to take into account when working with families.

Similarly, this data increases understanding about the particular things that men may find challenging e.g. nurturing a baby's emotions when they have poor emotional regulation themselves, being pulled into old behaviour patterns that they are trying to overcome, and being triggered by particular interactions or situations. Furthermore, framing some behaviour patterns as unhelpful coping strategies and providing alternatives, alongside providing a consistent, supportive relationship within which men can explore different ways of responding, could have the potential to lead to different outcomes for the family. This data also identifies some of the barriers to men changing abusive behaviours, for example, not taking responsibility for abusive behaviour, or feeling it is out of their control and therefore not something that they can change.

Further research would be useful to gain perspectives in different, diverse populations, and follow-up data of this sample would provide insight into whether these men are able to use their early motivation to change behaviour and break the cycle of intergenerational abuse and victimisation.

5.4 Implications for the intervention

While this study includes a specific population of men who may have different needs to non-abusive samples, there are nonetheless some key learnings to be taken from this study which can contribute to the development of an intervention for paternal depression.

- Beginning input during pregnancy ensures that there is time to provide key learning about infant development and emotional regulation before the baby arrives. This is particularly important for parents with multiple risk factors for poor outcomes as any support offered needs to meet the developmental and emotional needs of the baby, as well as working on parents' own wellbeing.
- A focus on emotional literacy and regulation may be particularly important for men with traumatic histories, whose parents may not have provided opportunities to learn these skills. This may also be important for men more generally, as masculine socialisation can impede the ability to identify emotional responses and employ flexible coping strategies. This includes recognising triggers and reactions to the flight-flight response and learning alternative ways of managing this.
- Enhancing flexibility in the adherence to masculine norms may also be a useful approach. Challenging some of the stereotypes and assumptions about how to behave could provide a wider range of potential coping responses to be available.
- Consistent, available support from trusted others helps men to feel safe to explore difficult feelings and experiences. This may be especially the case when there is shame attached to the feelings, and when habitual harmful ways of behaving need to be challenged.
- Providing parenting skills training (for example video feedback approaches) can help to harness motivation for change at the time of becoming a father. A strengths-based approach, which provides ongoing reinforcement for engagement through a focus on tangible improvements in relationships can be highly motivating for new fathers. This

may also help to narrow the gap between expectations of how a father should be and the challenging reality of parenting a newborn, thus reducing stress and supporting fathers to achieve important interpersonal goals.

- Making links between men's own experiences of being parented and their current symptoms was helpful for the men in this study. This perhaps helped to explain what was happening and provide a narrative to their experiences.
- Providing information about maternal mental health difficulties, as well as suggesting concrete ways to support their partner was highlighted by some men. They spoke about the distress associated with having a depressed partner, in particular noting feelings of frustration and inadequacy, which could be mitigated by more support around this.
- Identifying problematic communication patterns in the couple relationship and learning techniques to break these, as well as acknowledging the fact that the partner relationship has changed may help to manage difficulties that arise across the transition to parenthood.
- Finding ways to make access to support convenient and flexible is important in breaking down barriers.

CHAPTER 6 - DEVELOPING THE CONTENT OF AN INTERVENTION FOR PATERNAL PERINATAL DEPRESSION: AN INTERNATIONAL DELPHI STUDY

6.1 Introduction

As outlined in chapters 1-3, there are currently no trials of interventions targeting men with perinatal depression, and there is therefore a lack of data about what the components of such an intervention should be. However, data from qualitative studies of fathers, including those with symptoms of depression (summarised in Chapter 4), do suggest some areas that are associated with fathers' mental health, e.g. the quality of the couple relationship, men's knowledge and understanding of the birth process and of infant development, and managing the competing demands of early parenthood.

Furthermore, there are some reasons to believe that a cognitive behavioural approach may be beneficial for fathers. Cognitive behavioural therapy (CBT) is a well-established treatment for depression in the general population (Beck, 2011). Research indicates that men with symptoms of depression currently use and are open to using a range of cognitive, problem-solving and goal-based strategies to prevent and manage mental health, suggesting that a cognitive behavioural framework is acceptable and may be an appropriate approach for fathers (Proudfoot et al., 2015).

However, the specific needs that fathers have across the perinatal period (for example, dealing with changes in the partner relationship, coping with new demands and responsibilities, understanding infant development, and knowing where to go for different resources and sources of support (Letourneau et al, 2012; Baldwin et al, 2019)) are not addressed in current CBT interventions and may require specific adaptations to meet the unique demands of the perinatal period. Indeed, the unique nature of the transition to parenthood has led to the development of adapted CBT interventions to address the needs of women with perinatal depression (Danaher et al., 2013; O'Mahen et al., 2013; Trevillion et al., 2020). Adaptations have included using an online format for flexible engagement; introducing behavioural activation before presentation of cognitive strategies (due to challenges with attention that accompany having a baby); reducing homework tasks; building support networks;

incorporating partner sessions; and framing content specifically around perinatal topics. These adaptions have been found to be acceptable to women and feasible to deliver.

In order to inform potential adaptations for fathers, further characteristics and details need to be defined to provide health professionals with guidance about the most useful targets and components of a CBT-based intervention for paternal perinatal depression. Evidence-based cognitive behavioural treatments for depression attempt to target unhelpful beliefs and behaviours, as well as social factors, by employing therapeutic and behaviour change techniques which are relevant and feasible for the population of interest. The particular targets, mechanisms and techniques which are most relevant to men in the perinatal period need to be defined in order to develop effective interventions.

Some of this data can be elucidated from qualitative literature on men's experiences and the challenges and concerns that they identify, as highlighted in Chapter 4 and 5. A further source of knowledge and expertise about these key components is through clinicians who work with men with mental health difficulties in the perinatal period, academics who have gained knowledge about the key difficulties for fathers, and people (often fathers with lived experience) who have set up organisations to work with and support men in the perinatal period. These individuals have both a broad overview of the key issues in the field and the topics that repeatedly come up when working with fathers, as well as detailed knowledge of specific beliefs, attitudes and challenges that characterise fathers with depression. Gaining the views of these individuals about potential components of an intervention is therefore a useful way to complement and enhance the qualitative literature, as well as potentially identifying new areas for consideration.

Consensus building approaches, such as the Delphi method, gather expert opinion in order to move a developing field of research forward so that further action can be taken (Keeney, McKenna, & Hasson, 2011). Therefore, a Delphi method was considered to be appropriate way to gain the views of clinicians and academics who are working in this field, alongside the views of men who work with those with lived experience of paternal depression, on what the content of such an intervention should be.

6.2 Research Question & Aims

The aim of this study was to explore whether there is consensus among those with expertise on paternal mental health on the components and targets of an intervention to treat paternal perinatal depression, specifically: (1) typical areas of distress, (2) key beliefs and behaviours that are present in paternal depression and, (3) potential mechanisms of change for overcoming symptoms. The research question is:

What are the key components of a CBT-based intervention which can address the social, cognitive and behavioural factors that contribute to and perpetuate paternal depression in the perinatal period?

6.3 Methods

There are no standard reporting guidelines for Delphi studies across different fields (https://www.equator-network.org/). Therefore, following a scoping search of such guidance on Google scholar, reporting followed the CREDES guidance – Conducting and Reporting Delphi Studies in palliative care (Jünger, Payne, Brine, Radbruch, & Brearley, 2017). This guidance is based on a systematic review of 30 studies and provides a thorough outline of study components to be reported in health-related Delphi studies.

6.3.1 Study design

The Delphi technique is an established research method that involves rounds of survey questions in which experts are invited to provide their opinions on a particular topic and to generate a consensus. It is assumed that the opinions of many outweigh those of the individual, and thus, any consensus generated may be considered to be a valid expert opinion (Habibi, Sarafrazi, & Izadyar, 2014). The advantages of the Delphi method are that it has the potential to cover a wide geographical area, including gaining the views of international experts in the field, thus reducing recruiting bias; it brings a wide range of knowledge and experience to the decision-making process; it is anonymous, allowing views to be expressed and changed privately (particularly important when asking for expertise from people who may have lived experience) and reducing biases related to social desirability; and allows statistical aggregation so that data can be analysed and interpreted to answer the research questions (Trevelyan & Robinson, 2015). In preparation for conducting the study, I spoke with a colleague (Dr Eszter Szilassy) who had recently conducted a Delphi survey to gain advice on the process. She

suggested incorporating a snowballing technique to improve recruitment (see below) and reported having successfully used two rounds of questions in her work.

In this study, survey responses were collected through an online platform, allowing anonymous data to be collected from an international group of experts. In line with the original Delphi method (Hasson, Keeney, & McKenna, 2000) the study used a mixed-methods approach, whereby free-text boxes were used to gain qualitative data in the initial round of questions, followed by the use of Likert scales, generated by responses from round 1, in the second round (see below for more details).

Ethical approval for this study was granted by King's College London research ethics committee (Ref: LRS-18/19-10760) (see Appendix 13). All respondents gave informed consent to participate.

6.3.2 Participants

6.3.2.1 Inclusion criteria

The study aimed to recruit those with expertise in the field of paternal perinatal mental health. This included:

- Authors of relevant academic publications on paternal depression
- Clinicians/healthcare workers with expertise in working with fathers (e.g. in perinatal mental health services)
- Professionals with experience working with fathers with mental health problems in another capacity (e.g. as an advocate or peer support worker)
- Professionals working with an organisation related to fatherhood (e.g. Dads Matters, Fathers Reaching Out).

The above criteria may include those with lived experience, and this was welcomed. However, the study did not seek to recruit those whose only criteria was lived experience. The purpose was to recruit those who have knowledge of or exposure to a spectrum of experiences either from working with men in the perinatal period or through studying the literature in this field. This was intended to ensure that the number of responses was manageable and that participants could represent the views of a range of men.

Further criteria included those who had sufficient time and capacity to participate, and a willingness to respond to all stages of the study.

6.3.3 Recruitment

Sample size is dependent on a number of factors, including complexity of the problem, homogeneity of the sample, and resources. For relatively homogeneous samples, a sample size of 8-15 participants is recommended, with smaller numbers tending to reduce reliability, and samples over 15 adding little value (Keeney, McKenna, & Hasson, 2010; Skulmoski, Hartman, & Krahn, 2007). The sample for this study will be relatively homogenous as most participants were from professional backgrounds (clinicians and academics) and from high income countries. Therefore, this study aimed to recruit 10-12 respondents.

Potential participants were identified by the researcher through existing clinical contacts, knowledge of the literature/academics in the field, and an online search of organisations/charities who are providing support to fathers. Those meeting the above inclusion criteria were invited to participate in the study by email. The invitation outlined the aim of the Delphi study, and included a participant information sheet, detailing the process involved and the time commitment (see Appendix 14). They were also asked to recommend others who met inclusion criteria, thus incorporating a snowballing technique into the recruitment process to ensure that participation was not limited to the researcher's current network.

Following the initial invitation email, if no response was received a further email reminder was sent after 7 days. In the absence of a response to the reminder email it was assumed that the recipient did not wish to participate, and no further correspondence was sent.

As it was anticipated that some potential participants would not respond to the invitation email or would dropout after initial engagement, the study aimed to send invitation emails to around 30 potential participants. This was based on the fact that other Delphi studies reported response rates of between 40 and 70% to initial invites (Aqil et al., 2019; Freitas, Williams-Reade, Distelberg, Fox, & Lister, 2016; Pezaro & Clyne, 2016).

6.3.4 Procedure

Following recruitment, a link to the Round 1 questionnaire was emailed to those who had agreed to participate, with instructions about how to access the survey and the intended time frames. The questionnaire was delivered on an online survey platform

(https://www.onlinesurveys.ac.uk/) to enable respondents to complete it electronically and anonymously. Participants were asked to provide electronic consent and basic demographic information, including age category, gender and profession in order to assess the heterogeneity of the sample. No other identifying information was gathered.

A reminder email was sent approximately two weeks after the initial invitation to maximise responses.

Round 1 free-text responses were exported verbatim from the online survey platform to NVivo (software for the analysis of qualitative data) and were analysed using content analysis. They were used to generate a set of suggestions about potential content of an intervention, which formed the basis of Round 2. As such, respondents gained feedback on the range of responses that were provided in Round 1.

A link to the Round 2 questionnaire was sent two weeks after Round 1 closed. Using responses from the first round, participants were invited to rate each of the proposed components on a 7-point Likert scale, indicating how helpful they thought it would be to include in the intervention. The questions asked, for example, how important respondents thought it would be to cover, address, include or provide information about the particular item.

A reminder email was sent approximately two weeks after the initial invitation.

6.3.5 Survey design

In a classic Delphi design the first round is usually qualitative and intended to establish the breadth of expert opinion on the topic (Mead & Moseley, 2001). This study used a modified design in which the questions were based on key concepts that form the basis of cognitive behavioural interventions.

The first question was intended to consider the broad areas of challenge for fathers in the perinatal period. While these ideas have been covered to some extent in the qualitative literature (e.g. Baldwin et al., 2018), it is useful to verify these ideas with the current sample and identify if there are any new areas which have not previously been identified. Additionally, this question served to get participants thinking about the area in a broad way before responding to more detailed questions.

The second question related to identified issues with engagement of fathers in mental health interventions. Given the fact that many men do not recognise their own mental health needs and do not identify with the term ‘depression’, this was an opportunity to explore other words and language that is used to support men.

Models of CBT for depression highlight the role of cognitions, behaviours, and social factors in the onset and maintenance of symptoms. Research indicates that the pressures and challenges of the perinatal period may lead to particular kinds of thoughts, behaviours, and social factors that are unique to this period. Therefore, questions 3, 4 and 5 asked participants to identify what these are.

Questions 6 and 7 asked participants to use their experience to identify potential ways to overcome unhelpful thoughts/behaviours and what gets in the way of making positive changes. CBT approaches inherently include a number of mechanisms for change. This question asked participants to identify particular facilitators and barriers for these changes to take place in fathers.

Finally, question 8 allowed participants to add any additional thoughts or comments that they felt were relevant.

The questionnaire was therefore designed to seek expert opinion on factors relevant to a CBT-based intervention through a small number of well-focused open-ended questions for the first round. This approach is recommended by Trevelyan et al (2015) and maintains the qualitative aspect of the first-round while focussing respondents’ answers on specific topics.

A draft of the first round of the survey was piloted on 3 colleagues who are familiar with the research area (two clinical psychologists who work with families in the perinatal period and an academic who has expertise in fathers’ mental health). Following this pilot stage, several changes were made to the survey to improve comprehension of the questions. Specifically, (1) background information was added before the main questions to help contextualise the survey and remind respondents of the overall aims, and (2) further information was provided about the aims of individual questions to help focus respondents’ attention on the purpose of the questions. The questions used in round 1 can be seen in Table 5.

Table 5 - Round one questions

	Question
1	What are the key difficulties that come up for men during the perinatal period? This will help us think about the different areas for the intervention to cover. Please think about the full range of things that may be associated with distress, both antenatally and postnatally.
2	In your experience, what language and words do men use to talk about their distress? This will help us to think about the kind of language to use in the intervention.
3	What are the main social or environmental factors that might trigger and maintain symptoms of depression during the perinatal period? This will help us to understand the social pressures that men may face so that we can address them in the intervention
4	What are the main unhelpful beliefs that men may have during the perinatal period which are associated with distress? These ideas will help us think about which kind of beliefs/thoughts to target. Please think about both the antenatal and postnatal period
5	What are some of the coping strategies that men use to deal with distress during the perinatal period (this may include both helpful and unhelpful strategies)? These ideas will help us think about which behaviours to target
6	In your experience, what helps expectant and new fathers to change their beliefs and behaviours?
7	What gets in the way of men being able to change their beliefs and behaviours?
8	Do you have any other thoughts or comments that you think would be helpful?

The Round 2 survey involved fixed-response questions based on the answers to round 1. Specifically, the survey used a series of statements, developed from round 1 responses, with participants being asked to rate the statements on a 7-point Likert scale. Respondents were given the following anchors for the 7-point scale: 1-unhelpful to include; 3- could include; 5-helpful to include; 7-essential to include. A 7-point scale was chosen as research suggests that this has reasonable reliability and validity and is also favoured by participants (Preston & Colman, 2000). For each item, participants had the opportunity to disclose why they had chosen to mark each item with lower or higher priority within an open text field. In addition, participants had the opportunity to suggest further components which were not currently included in the list.

6.3.6 Analysis

6.3.6.1 Round 1

Responses were exported into NVivo (version 12) and analysed using content analysis. Qualitative content analysis is a method that involves systematically describing phenomena by reducing data to concepts which can be categorised (Elo et al., 2014). This was intended to reduce the large number of responses from Round 1 to a manageable amount for Round 2 by clustering responses which were similar. Content analysis differs from thematic analysis in that it does not require interpretation of the data, but instead takes a descriptive approach (Vaismoradi, Turunen, & Bondas, 2013). This was considered useful for the current analysis, as the intention was to reduce the data for the purposes of making Round 2 manageable while retaining the original meanings and, sometimes, words of the participants.

In content analysis, concepts can be categorised inductively i.e. categories are developed throughout the process of analysis based on the data, or deductively i.e. categories are defined beforehand and data is coded by these pre-existing categories. For this study, an inductive approach was used so that the ideas and concepts provided by participants had primacy and drove the development of the categories. However, some prior structure was provided by the design of the survey, and therefore responses were coded under the broad themes of the survey questions.

Analysis followed the outline provided by Hsieh and Shannon (Hsieh & Shannon, 2005): responses were read and re-read to immerse myself in the data; initial categories were noted, often using exact wording from participants (e.g. ‘Changes in the partner relationship cause conflict’); data was coded line by line with new labels for categories being developed that could capture more than one response more effectively (e.g. ‘Conflict in the partner relationship’); categories were grouped into higher level categories (e.g. Relationship with partner); data within and across subcategories and higher level categories were compared to ensure consistency; definitions or labels for each category were developed. This process provided a list of subcategories in the form of summary statements, which were used as the basis for Round 2.

6.3.6.2 Round 2

In round 2 respondents were asked to rate the summary statements on a 7-point Likert scale from 'unhelpful to include' to 'essential to include'. These were framed as questions, for example, 'How important is it to cover the following difficulties around health?', followed by statements related to mental health and physical health. Responses were exported into Microsoft Excel and the mean, standard deviation, and maximum and minimum ranges for each item were calculated.

The level of consensus was also calculated, based on the percentage of responses within 2 scale points of each other. Where items reached over 60% agreement this was considered as consensus.

There are no conclusive guidelines for establishing consensus in a Delphi study and a range of subjective and quantitative methods have been used in other studies (e.g. Aqil et al., 2019; Freitas et al., 2016; Seidler et al., 2019). Von der Gracht et al (von der Gracht, 2012), in a review of methods used in Delphi studies, note how the consensus method used may depend on the type of question or scale that researchers employ and the level of objectivity that they require (for example, in some cases, researchers make a subjective decision about when they think consensus has been reached without an a priori definition). To ensure an objective level of agreement that fits the study design, this study followed Pezaro and Clyne (2015) who also used a 7-point Likert scale within a Delphi study to design a mental health-related intervention. In that study, consensus was defined as 60% of respondents marking within 2 adjacent response points on the 7-point scale, which resulted in approximately 50% of fixed-response statements gaining consensus the first time they were presented. Other Delphi studies in the field of fathers' mental health have also used a similar approach (Freitas et al., 2016; Seidler et al., 2019). This method was therefore used in the current study.

Where consensus indicates that an item should be included or omitted from the intervention, this information will be taken forward in the development of the intervention manual. For items where consensus is not reached, participants' free-text responses were analysed to elucidate any reasons for mixed responses or particular arguments for inclusion/exclusion of the item. This was also compared with the wider literature so that a final decision could be made about the item.

6.4 Ethical and Regulatory Considerations

6.4.1 Informed consent

The researcher is an experienced clinician and has undertaken Good Clinical Practice (GCP) training in obtaining informed consent in the conduct of research.

During recruitment potential participants were emailed clear information (Participant Information Sheet) about the purpose, subject and nature of the study and what would be required of them if they consented to participate. Potential participants were given a minimum of 24 hours to consider their participation before formal consent was sought and were given the telephone number of the researcher in case they had any questions.

If they were interested in taking part, potential participants were informed that their responses would be anonymous and confidential (e.g. names and identifying information would not be used in the survey and their details would not be shared with other participants or those outside the research team) and they were reminded that they were under no obligation to take part. Prior to starting the survey, participants were asked to confirm that they had read and understood the Participant Information Sheet and to provide informed consent within the survey platform, by ticking the appropriate boxes. They could not proceed to the survey without completing this stage and were informed that completion and clicking 'Next' indicated consent.

6.4.2 Disclosure of personal information

Participants were asked to provide their role category, age category and gender. This allowed the researcher to know the spread of the sample. No other personal information was collected. This information was stored separately to survey responses on a password-protected university computer.

6.4.3 Potential burden and benefits for participants

Participants were asked to give their time without reimbursement for this study. However, it was hoped that the opportunity to participate and consider what new and expectant fathers may need was stimulating, creative and potentially educational.

6.4.4 Data protection and participant confidentiality

Names and email addresses of potential participants were stored on password-protected computers within a secure drive that was only accessible to the me and my supervisor. The email invitation made use of the BCC function so that participants were not aware of who else had been invited to take part in the study. Responses to the survey were via an online link to www.onlinesurveys.ac.uk and were not linked to participants' identity. The online surveys platform collects IP addresses from respondents. However, these cannot be accessed by researchers. In addition, all responses were exported to a password-protected university computer and deleted from the online platform at the end of the study. The responses were stored in separate folders to participant names.

6.5 Results

Email invitations were initially sent to 27 people. One of these people suggested a colleague who worked in the field who may be interested in taking part. Therefore 28 invitations were sent in total. Of these, 15 (54%) agreed to participate and 10 (36%) completed round 1. Nine (90%) of those who contributed to round 1 completed round 2.

Participants came from a variety of professional backgrounds, including health professionals, academics, and representatives from the 3rd sector, and included both male and female respondents. Table 6 shows the demographic characteristics of the sample.

Table 6 - Demographic characteristics of participants

Demographics	N
Gender	
Male	6
Female	4
Age	
26-35	2
36-45	4
46-55	2
55+	2
Professional role	
Academic	5
Clinician	5
Other (3rd sector/company director)	2

6.5.1 Round 1

Free text responses generated in Round 1 were summarised into 82 subcategories or summary statements. These were grouped into 15 broad categories, including, for example, social support, relationship with partner, help-seeking. The broad categories and examples of the summary statements that were generated within each question can be seen in Table 7. Questions 1 and 3 (key difficulties and social and environmental factors) were analysed together as they produced very similar responses.

Participants interpreted question 2 (language used to express distress) in different ways, with some providing words or phrases which men might use to describe distress and others discussing styles of responding or behavioural responses to stress. Therefore, this was not included in round 2. Instead, the responses to this question were extracted and discussed by me and my supervisor in terms of how they could contribute to intervention development.

A narrative summary of responses to round 1 questions is provided below.

6.5.1.1 Key difficulties, including social and environmental factors that contribute to depressive symptoms

Relationship changes/difficulties with partner was the most cited response in relation to paternal distress. Other frequent responses included sleep deprivation, limited social support, increased responsibility, lack of access to information about the transition to parenthood, financial difficulties, and poor understanding of their own mental health. In addition, some respondents noted difficulties related to work such as lack of job security and having to return to work too soon, alongside the challenge of a shift in identity. It was also noted that exclusion from health services and a sense of being marginalised can contribute to difficulties.

6.5.1.2 Unhelpful beliefs associated with distress

A wide array of beliefs specific to the perinatal period were generated. This included beliefs that may prevent help-seeking such as the belief amongst fathers that the focus should be on mum and baby, that asking for help is a form of weakness, and that only women suffer from postnatal depression. Further beliefs were identified around self-efficacy such as thoughts about being useless, a bad father, or that they should be able to cope. Relationship-based beliefs

were also noted, for example, the sense of letting their partner down, of the relationship changing irreparably, and of not being important to the baby.

6.5.1.3 Coping strategies

In terms of helpful coping strategies, the most frequently cited responses included exercising and talking to friends, as well as maintaining hobbies and using internet resources to find information. Key unhelpful strategies were alcohol use, substance use, responding with aggression/irritability, and forms of avoidance such as social withdrawal and working long hours.

6.5.1.4 Facilitators and barriers to change

In terms of what fathers may find helpful to initiate change, peer support was the most frequent response, alongside a range of information including about parent-infant relationships, support services and relationship changes. Normalising challenges and help-seeking was also noted, as well as encouragement to engage in good health behaviours. The most frequently cited factor that might get in the way of change was masculine stereotypes, as well as a lack of awareness about their own needs or a lack of knowledge about where to get support. Further responses included services not being tailored for fathers, time demands at work, and contradictory messages about fatherhood.

Table 7 - Relationship between Round 1 questions and Round 2 categories

Round 1 question	Example subcategory	Category
(1) Key difficulties & (3) Social and environmental factors	Maternal mental health difficulties	Health
	Sleep deprivation	
	Worries about bonding	The baby
	Lack of confidence in baby care	
	Exclusive focus on mother and baby	Health services
	Inadequate preparation for fathers	
	Changes in social life	Social support
	Social isolation	
	Relationship changes	Partner relationship
	Responsibility for caring for partner	
	Role confusion and uncertainty	Role changes
	Masculine stereotypes	
	Financial difficulties	Work and finances
	Lack of flexible work practices	
(4) Unhelpful beliefs	I am weak if I'm struggling	Help seeking
	Only women get postnatal depression	

	I am letting my partner down I won't be a good father	Self-efficacy and relationships
(5) Coping strategies	Exercising Talking to friends	Helpful strategies
	Drinking alcohol Becoming irritable	Unhelpful strategies
(6) Making changes – what helps?	Normalising the idea of asking for help Information specific to fathers	Information & education
	Individual therapy Peer support	Interventions
(7) Making changes – what gets in the way?	Men's own masculine stereotypes Not knowing how to access services	Internal factors
	Time demands at work and home Services not tailored to fathers	External factors

6.5.2 Round 2

6.5.2.1 Scale responses

Of the 82 summary statements which were presented to respondents in Round 2, 42 (52%) reached consensus to be included in the intervention (no statements reached consensus to not be included). The mean score across all 42 items being 5.96 (SD 0.44). Agreement was between 67% and 89% (i.e. 6 to 8 people within 2 adjacent points of each other), and the majority of these items (80%) had a mode of 7 i.e. most respondents scoring the item as essential to include.

Table 4 provides a list of the summary statements, including showing which summary statements reached consensus within each broad category (highlighted in bold), alongside means, standard deviations and maximum/minimum scores for each item. Categories and items which reached a high level of consensus for inclusion are summarised below.

6.5.2.2 Key difficulties, including social and environmental factors that contribute to depressive symptoms.

These questions generated 28 separate items across 7 broad categories. Items with the highest consensus were 'difficulty recognising their own mental health needs' and 'sleep deprivation/fatigue' (89%). The categories 'the baby', 'partner relationship', and 'social support', also contained a high number of items with a consensus to include. In contrast,

categories covering issues related to ‘health services’ and ‘work and finances’ got more mixed responses.

6.5.2.3 Unhelpful beliefs associated with distress

Responses to this question were summarised into 2 broad categories covering 18 items which captured different beliefs fathers may hold that could be addressed in an intervention. The category ‘self-efficacy and relationships’ contained no items which reached consensus, while the category ‘help-seeking’ contained a mixture of items which did and did not reach consensus. In particular, the beliefs ‘I need to focus on mum and baby rather than myself’ and ‘I’m not important to the birth or infant wellbeing’ reached a high level of consensus (78%).

6.5.2.4 Coping strategies

Responses to this question included the broad categories ‘helpful and unhelpful coping strategies’, which covered 15 subcategories. In terms of unhelpful coping strategies, most items gained consensus to be included, with aggression/irritability reaching the highest level of consensus (89%). Helpful strategies were more mixed – respondents agreed that exercising and talking to friends/partner were important to include (67-89%), while other strategies such as maintaining hobbies and using internet resources did not reach consensus.

6.5.2.5 Facilitators to change

Responses to the question about what supports change comprised 2 broad categories – ‘information & education’ and ‘interventions’ - covering 12 items. Both categories were mixed in terms of items which reached consensus. Items related to providing father-specific information/support and normalising the experience reached a high level of agreement for inclusion (78%), along with providing parenting interventions and peer support (78%).

6.5.2.6 Barriers to change

This question asked about things which can get in the way of making changes. Two categories, external and internal factors, covered 10 items. Most items under the category ‘external factors’ did not reach consensus, with several respondents indicating these should not be included. In terms of internal factors, ‘lack of awareness of own mental health needs’ and ‘not help-seeking due to stigma’ reached the highest level of consensus (89%).

Table 8 - Summary statistics (mean, standard deviation, minimum and maximum scores) and level of consensus reached for items in Round 2

Round 2 item	Mean	SD	Min	Max	% consensus
Questions 1 and 3 - Key difficulties and environmental stressors					
HEALTH					
Maternal mental health difficulties	5.89	1.17	4	7	55
Maternal physical health difficulties	5.33	1.50	3	7	55
Difficulty recognising own mental health needs	**6.33**	**0.71**	**5**	**7**	**89**
Sleep deprivation and fatigue	**6.56**	**0.73**	**5**	**7**	**89**
THE BABY					
Worries about bonding with the baby	**6.00**	**1.41**	**3**	**7**	**67**
Worries about the health of the baby	**5.78**	**1.64**	**2**	**7**	**67**
Lack of confidence in baby care	**6.00**	**1.12**	**4**	**7**	**67**
Responsibility for caring for the baby	**5.44**	**1.94**	**1**	**7**	**67**
HEALTH SERVICES					
Exclusion by services	4.78	2.05	1	7	44
Exclusive focus on mother and baby by services	4.33	1.73	2	7	44
Not understanding how services work	5.11	2.09	1	7	55
Lack of access to information	5.00	1.66	2	7	55
Inadequate preparation for parenthood	**4.44**	**1.42**	**2**	**6**	**67**
Exclusion from mothers' social groups	4.33	1.80	1	7	44
SOCIAL SUPPORT					
Changes in social life	**5.56**	**2.13**	**1**	**7**	**78**
Limited social support	**5.56**	**2.19**	**1**	**7**	**67**
Social isolation	**5.78**	**1.92**	**1**	**7**	**78**
PARTNER RELATIONSHIP					
Relationship changes and difficulties	**5.89**	**1.96**	**1**	**7**	**78**
Responsibility for caring for partner	**6.00**	**2.00**	**1**	**7**	**78**
ROLE CHANGES					
Role confusion and uncertainty	**5.22**	**2.22**	**1**	**7**	**67**

Masculine stereotypes	4.89	2.37	1	7	44
Existential challenge	5.00	1.58	3	7	44
WORK AND FINANCES					
Financial difficulties	**5.67**	**1.22**	**3**	**7**	**67**
Responsibility for being the breadwinner	5.44	1.33	3	7	55
Lack of job security	5.22	1.86	1	7	55
Going back to work so early	**6.00**	**1.22**	**4**	**7**	**78**
Lack of family-friendly, flexible work practices	**5.67**	**1.41**	**3**	**7**	**67**
Work-home life balance	5.56	1.42	3	7	55
Question 4 - Unhelpful beliefs					
HELP-SEEKING					
I am weak if I'm struggling	**5.22**	**2.59**	**1**	**7**	**67**
I can't ask for help because services are for mum	5.22	1.99	1	7	55
Only women get postnatal depression	5.78	1.30	4	7	55
This will pass so I don't need to get help	**5.89**	**1.54**	**3**	**7**	**67**
I need to focus on mum and baby, not myself	**5.89**	**1.45**	**3**	**7**	**78**
I just have to put up with this	5.78	1.56	3	7	55
I'm not important to the birth or infant wellbeing	**6.11**	**1.05**	**4**	**7**	**78**
SELF-EFFICACY & RELATIONSHIPS					
I am letting my partner down	5.11	1.96	1	7	44
I don't know how to help my partner	5.22	2.05	1	7	44
I should be able to cope	5.33	2.00	1	7	44
I won't be a good father	5.22	1.92	1	7	44
If I can't provide for my family, I'm useless	4.89	2.20	1	7	44
If I don't know how to care for the baby, I'm a bad father	5.38	1.77	2	7	44
My baby prefers my partner to me	4.89	2.20	1	7	44
My partner doesn't have time for me anymore	4.89	2.20	1	7	44
My relationship with my partner will never be the same again	4.89	2.47	1	7	44
I'm becoming like my own father	4.78	2.39	1	7	44

Question 5 - Coping strategies and responses					
HELPFUL STRATEGIES					
Exercising	**6.44**	**0.73**	**5**	**7**	**89**
Talking to friends	**6.22**	**0.83**	**5**	**7**	**78**
Talking to partner	**5.89**	**1.69**	**2**	**7**	**67**
Using internet resources e.g. websites, podcasts	5.11	1.76	2	7	55
Maintaining hobbies	5.44	1.67	2	7	55
Attending baby groups	4.33	1.73	2	7	44
UNHELPFUL STRATEGIES					
Abusive behaviour	**5.78**	**1.99**	**2**	**7**	**67**
Aggression and irritability	**6.67**	**0.71**	**5**	**7**	**89**
Drinking heavily	**6.33**	**0.87**	**5**	**7**	**78**
Using drugs	**6.44**	**0.88**	**5**	**7**	**78**
Social withdrawal	**6.44**	**0.88**	**5**	**7**	**78**
Not talking to partner	**6.00**	**1.12**	**4**	**7**	**67**
Infidelity	5.44	1.59	3	7	44
Working long hours	5.89	1.36	4	7	55
Avoiding things	**6.44**	**0.88**	**5**	**7**	**78**
Question 6 - Making changes: what helps?					
INFORMATION & EDUCATION					
Information about parent infant relationships	**6.22**	**1.09**	**4**	**7**	**78**
Information specific to fathers	**5.89**	**1.76**	**2**	**7**	**78**
Information about available support services	5.78	1.09	4	7	55
Normalising the emotional experience of fatherhood	**6.44**	**0.88**	**5**	**7**	**78**
Normalising the idea of asking for help	**6.33**	**1.12**	**4**	**7**	**78**
Encouragement to engage in good health behaviours	**5.56**	**2.01**	**1**	**7**	**67**
INTERVENTIONS					
Support that is specific to fathers' issues	**5.67**	**1.73**	**2**	**7**	**67**
A knowledgeable professional to discuss issues with	5.22	1.99	1	7	55

Individual therapy	5.78	1.48	4	7	55
Couple therapy	5.78	1.48	4	7	55
Parenting interventions	**6.11**	**1.27**	**4**	**7**	**78**
Peer support	**6.22**	**1.30**	**4**	**7**	**78**
Question 7 - Making changes: what gets in the way?					
INTERNAL FACTORS					
Lack of awareness of own mental health needs	**6.56**	**0.73**	**5**	**7**	**89**
Man's own masculine stereotypes	5.11	2.32	1	7	55
Not help-seeking due to thinking they'll be ignored	5.22	1.20	4	7	55
Not help-seeking due to stigma	**6.22**	**0.97**	**4**	**7**	**89**
Not knowing how to access services	**5.56**	**1.59**	**2**	**7**	**78**
EXTERNAL FACTORS					
Inconsistent or contradictory messages about fathers	4.56	1.74	2	7	44
Maternal gatekeeping	4.44	2.01	1	7	55
Services not being tailored for fathers	4.89	2.20	1	7	44
Services not engaging with fathers	5.11	1.90	1	7	55
Time demands at work and home	**5.89**	**1.62**	**2**	**7**	**78**

6.5.2.7 Free text responses

Seven respondents used the option of providing further information for their responses, which helped to elucidate the reasons for non-consensus of some items. In total 38 free text responses were provided.

Respondents noted that it would be important to focus on issues which men had some control over and therefore which they have the potential to change. This was particularly the case for items related to health services and work and finances, which respondents felt were sometimes beyond the control of fathers. This also helped to explain the mixed responses on external factors which can get in the way of making changes.

Several respondents emphasised the importance of avoiding being too focused on deficits and problems, and instead ensuring a strengths-based approach which highlights opportunities for change. This was especially relevant to items about unhelpful beliefs, which several respondents did not wish to include. Furthermore, they noted that these beliefs may be different for each individual and, therefore, ideally the intervention could be tailored to focus on those unhelpful beliefs which are specific to each father. These responses helped to explain the low consensus around including negative beliefs related to self-efficacy and help-seeking.

Despite non-consensus for the inclusion of content related to maternal mental health difficulties, some respondents specifically highlighted this as being important to include, due to evidence that paternal mental health problems are more likely in the context of maternal mental health difficulties. However, the suggestion was also made that this should be brief, in order not to invalidate paternal experiences by focusing on the mother's health.

Some respondents used the free text boxes to make suggestions for further difficulties that men may face, which had not originally come up in round 1. This included paternal experience of the birth, paternal anxiety, men's own experience of being parented, the way life changes after having a baby and how long these changes persist, and the possibility of the father being the main caregiver. These were considered in light of data from the other studies in this thesis along with wider literature as to whether or not they should be included.

6.6 Discussion

This Delphi study aimed to achieve expert consensus on the components and targets of a CBT-based intervention for paternal perinatal depression. A wide range of social, psychological, and behavioural factors which can impact on men's mental health were identified by the 10 respondents in round 1, and in round 2 over half (52%) of these items were rated as being important to include or cover in a future intervention.

The round 1 responses indicated that there were already agreements amongst respondents about important elements to consider in an intervention for fathers. Particular issues were mentioned by over half of the respondents (e.g. relationship changes, social isolation, and using alcohol as a coping strategy). Unsurprisingly, these tended to be items which also gained consensus for inclusion during round 2. However, other items which were generated by only a small number of participants in round 1 also gained a high level of consensus in round 2 (e.g. worries about

the health of the baby, beliefs that they are not important to the baby) indicating the importance of this method in using a range of experts and presenting individual views to the whole group for consideration.

6.6.1 Providing father-specific information

Some of the issues that participants agreed on as being important for an intervention for paternal depression corresponded with literature about information that would benefit new fathers in general. This included information about relationship changes; raising awareness about the increased risk for mental health disorders in the perinatal period; information about infant development, baby care, and parent-child attachment; and highlighting the importance of a social support network (Aqil et al., 2019; Fletcher et al., 2019; May & Fletcher, 2013). Respondents also agreed that it is important to have information that is specific to fathers. Providing high quality information at different stages throughout the perinatal period is considered not only important in supporting fathers to have a positive transition to fatherhood, but also potentially in reducing stress and preventing the onset of mental health difficulties (Forsyth, Skouteris, Wertheim, Paxton, & Milgrom, 2011). Furthermore, a survey of 174 Australian fathers (Da Costa *et al.*, 2017), approximately 20% of whom reported perinatal psychological distress, asked men about their preferences for information related to pregnancy and parenting. Those who were distressed were more likely to endorse topics on strategies to improve emotional wellbeing and emotional adjustment, and how to access psychosocial resources. Therefore, where fathers are identified as having mild-moderate symptoms of depression, providing targeted information about the transition to fatherhood as well as specific content about emotional wellbeing is an important strategy in supporting recovery and preventing deterioration of symptoms.

Other literature also suggests that providing information about maternal mental health difficulties and how to support the mother can be helpful for fathers (Lever Taylor et al., 2018). This did not reach consensus in the current study and some experts suggested that items related to the mother's mental health should be kept brief so as not to invalidate men's experiences. In contrast, all agreed that relationship difficulties would be important to include. Therefore, beneficial content may focus more on relational issues such as communication, information about possible changes, and how to build a strong parenting alliance. Nevertheless, it seems important to include some content about maternal mental health, given that 1 in 4 women are likely to have mental health needs in the perinatal period (Howard et al., 2018) and the couple

relationship is such an important context for recovery and wellbeing (Pilkington et al., 2017). Furthermore, men are more likely to have mental health needs themselves when mothers are unwell and therefore there is an increased likelihood that those accessing the intervention will have a female partner who has poorer mental health (Goodman, 2004).

Given the impact of depression on people's motivation and concentration, any information that is provided to fathers may need to be provided in manageable chunks, in easily accessible formats. In universal populations, Fletcher et al (Fletcher et al., 2019) found that using text messages to provide information to fathers that was synchronised with different stages of the perinatal period was highly valued by fathers. Similarly, studies exploring fathers' preferences for online information found that short, practical summaries and tips were valued (S. J. Lee & Walsh, 2015; White et al., 2016). Brief, digestible, highly targeted pieces of information may therefore be useful for men with symptoms of depression.

6.6.2 Language and mental health

An additional benefit of framing content around becoming a father is that this may be more acceptable to men than content which is about mental health disorders directly. Given the stigma around mental health disorders, and the importance of masculine stereotypes identified by the respondents in this study, better engagement may be attained by focusing on building healthy relationships and learning about the new role rather than on symptoms of depression. This also corresponds to the suggestions made in free text by the respondents, that content should be strengths-based.

Question 2, which asked respondents about the language that men use to talk about distress, further highlighted that terms related directly to mental health may be unhelpful. Here, respondents suggested words such as tired, stressed, struggling, and overwhelmed, and noted that men may use jokes, try to put on a brave face and underplay what is happening, perhaps describing feeling cross or noting physical symptoms. This is helpful in thinking about the way that an intervention is framed as well as the way that health professionals who deliver the intervention may need to approach discussions around paternal wellbeing.

6.6.3 Individualised support

Respondents suggested that it is important to identify the particular beliefs that individuals hold and work on challenging these, rather than cover a wide range of negative beliefs that may or

may not be relevant to each father. This is important to consider in the context of Step 2 IAPT interventions, which include guided self-help, groups and workshops, which may have some constraints around creating individualised formulations. In one-on-one therapy, such as that provided at Step 3, there is the opportunity to ask about key unhelpful beliefs which are specific to the individual and then to work with these i.e. to build an individualised formulation of the person's difficulties. In a guided self-help intervention with minimal therapist support, this is harder to do – naming all the possible unhelpful beliefs that men may hold is unlikely to be helpful, but it is also important to validate the range of responses that men may have to becoming a father and normalise worries in order to remove shame and stigma. Indeed, consensus was reached on ideas around normalising the emotional experience of fatherhood and the idea of asking for help, as ways of challenging unhelpful beliefs. However, other online CBT interventions have developed ways of providing clients with choice about which content they access, permitting a wide range of experiences to be noted within the intervention, at the same time as allowing people to focus on the issues that are specific to them (e.g. Danaher et al., 2013). This strategy may therefore be helpful in an intervention for fathers, allowing them to develop an individualised understanding of difficulties and select content that is relevant to their needs. Similarly, where fathers attend groups or workshops, they may have the opportunity to be exposed to the range of beliefs that other fathers hold, helping to normalise their own worries.

6.6.4 Fathers' coping strategies

In terms of helpful coping strategies, a high level of consensus was gained with respect to talking to friends and physical exercise, with a reasonable level also being achieved on talking to partners. Other research has also noted these factors as important for men's mental health, including fathers. A report by Movember (Movember, 2019) suggested that men may not recognise the importance of close relationships for their wellbeing and may lose friendships when they enter fatherhood. Encouraging peer support and creating opportunities to talk to other fathers may therefore be a useful intervention for overcoming mental health difficulties (Bäckström et al., 2020). In a CBT-based intervention, targeting social connections may include psychoeducation around the importance of friendships, testimonials from other fathers about their experience, and behavioural activation around connecting with peers. In an online format, this could include videos of other fathers, and potentially a chat feature where fathers could connect with each other. In a qualitative exploration of the mechanisms of impact of their

SMS intervention, Fletcher et al (Fletcher et al., 2019) found that some fathers noted an increased feeling of connection from receiving the regular messages, with one father describing it as a 'sort of mate tapping you on the shoulder'. Therefore, receiving the intervention itself may create a feeling of support and connection that could help to overcome difficulties.

In terms of exercise, Giallo et al (Giallo, Evans, & Williams, 2018) piloted an intervention for fathers' mental health which was focused on physical exercise and also incorporated a peer support component. 'Working out dads' is a six-week group programme for fathers of 0-4 year olds, based in a gym, which includes psycho-education about health and parenting alongside a group gym workout. Around 40% of the 43 fathers who took part in the study had some symptoms of depression at the start of the study. Feedback was very positive and early indications suggest that this may reduce symptoms of depression. Encouraging good health behaviours was also identified and agreed upon by respondents in this study as a way to change unhelpful behaviour patterns. In addition, a focus on physical health may help to reduce stigma around men's mental health, while targeting some of the physiological effects of stress.

Most of the unhelpful coping strategies suggested in round 1 of this Delphi study were considered important to address. These included use of alcohol or substances, aggressive or abusive behaviour, and avoidance and withdrawal. Previous studies have identified these behaviours as being particularly relevant to men's experience of depression (Martin, Neighbors, & Griffith, 2013) as well as noting the negative impact on men's physical health, the couple relationship, and children in the family (Bruno et al., 2020). Furthermore, the fathers who took part in interviews in study 2 of this thesis (Chapters 4 and 5) reported using many of these unhelpful coping strategies and made links between these strategies, their mental health and their relationships (Domoney & Trevillion, 2020). Therefore, these are important targets for an intervention. In study 2, fathers noted how increasing their understanding about the triggers to these behaviours was important in making changes, as well as feeling that they had a safe, non-judgemental therapeutic relationship within which to explore their behaviours. In the wider literature, behaviour change techniques such as providing normative information, prompting commitment and review of goals, and improving bodily awareness have been found to be helpful in reducing alcohol consumption and anger, including in online interventions (Black, Mullan, & Sharpe, 2016; Shepherd & Cant, 2019). Behavioural activation, and techniques such as cognitive restructuring and behavioural experiments can be useful ways to

address avoidance in depression. These issues and techniques will therefore be important components of an intervention for paternal depression.

6.6.5 Potential barriers

Respondents in this Delphi study identified and agreed on several issues that may hinder the process of change. Items with the highest level of consensus (89%) included issues related to men not recognising their own mental health needs and not help-seeking due to stigma. This was also identified as an issue by the fathers in study 2, with one father noting that 'a lot of men probably wouldn't come forward and ask for help' (pg 183). Other barriers included not knowing how to access services, and time demands. Some of these barriers have been identified in previous research, including by fathers themselves, and may make it difficult for men to take up any intervention (Baldwin et al., 2019; Darwin et al., 2017). These are, therefore, issues which may need to be addressed on a wider organisational level within maternity and other primary care services, in order to encourage men to take up the offer of support.

An additional area of concern raised by participants was around work practices. In particular, fathers having to return to work early and the lack of family-friendly working practices. This can impact on fathers' levels of involvement in family life and add to feelings of exclusion, as well as causing stress due to increased demands. While shared parental leave was introduced in the UK in 2015, a report by the Fatherhood Institute (Burgess & Davies, 2017) found that men are more likely than women to have requests for flexible working turned down (Olchawski, 2016), and fathers were more likely than mothers to fear that taking leave, or asking to work flexibly, would damage their careers (Working Families, 2017). Several participants noted that it is important for an intervention to focus on issues which men have some control over and therefore which they have the potential to change. This may be challenging in the context of work practices. Nevertheless, an intervention could potentially support the development of problem-solving and communication skills, which may enhance men's ability to navigate these challenges.

6.6.6 Further issues arising

Additional items that respondents raised during round 2 (which were therefore not subjected to the group consensus process) included paternal anxiety; paternal experience of the birth; the way life changes after having a baby and how long these changes persist; the possibility of the father being the main caregiver; men's own experience of being parented.

Anxiety is highly comorbid with depression and also prevalent in the perinatal period (Falah-Hassani, Shiri, & Dennis, 2016). Similarly, trauma symptoms as a result of witnessing a difficult birth are increasingly being recognised as impacting on fathers in the postnatal period (Etheridge & Slade, 2017) and may be mistaken for depression due to some overlap in presentation. It would therefore seem appropriate to include some information about this within an intervention to support fathers to make sense of their experience and to seek appropriate additional support, where needed. Additionally, as health professionals working in the perinatal period begin to incorporate assessment of fathers' mental health into their practice, it will be important for assessment tools and procedures to be able to distinguish between these presentations so that the correct support can be offered.

The ways that life changes during the transition to parenthood are likely to be covered under other intervention components such as relationship changes, infant development, and the need to maintain a social network, while those fathers who are the main caregiver should be able to tailor the intervention components to their needs, focusing more on those elements around baby care and the parent-infant relationship.

Men's own experience of being parented is an interesting issue. Experiences of being parented have been included in guided self-help interventions for maternal perinatal depression (Milgrom, Schembri, Ericksen, Ross, & Gemmill, 2011; Trevillion et al., 2020) and can support new fathers to make sense of current behaviour patterns in light of their past experiences, as noted by the fathers in study 2 of this thesis (Domoney & Trevillion, 2020). However, several respondents suggested a strengths-based approach, focused on issues that men have some control over. Similarly, other literature suggests a practical skills-based approach for men's depression, and that supporting fathers' learning of tangible skills may be helpful in improving depression symptoms (Rominov et al., 2016; Spendelow, 2015a). Therefore, to balance these views, it may be that the intervention can encourage men to think about whether they would like to approach parenting in a similar or different way to their own experience, and what this might look like on a day-to-day basis. This incorporates an element of reflection while maintaining a focus on current behaviours.

6.6.7 Limitations

This Delphi study had only two rounds, which meant that respondents were not given the opportunity to rescore items in light of others' responses, or to rate the additional items that

had been raised in round 2. Nevertheless, in round 2 respondents were able to gain feedback about the range of responses to round 1 and consider whether they thought these were important to include, as well as having the opportunity to comment on responses in the free text boxes. Therefore, the key elements of the Delphi technique were maintained, and 52% of items gained consensus with this method, which is in line with other studies (Pezaro & Clyne, 2016; Seidler et al., 2019).

The modified nature of round 1, whereby questions posed to participants directed their attention to specific areas, meant that respondents did not have the freedom to suggest any intervention component they wanted. These areas were predetermined due to being important in interventions that are based on a cognitive behavioural model i.e. identifying social, cognitive and behavioural factors which have a negative impact on wellbeing and are potentially modifiable. Elucidating these from experts leads to a better understanding of what to target within an intervention which is principally psychoeducational and contains relatively didactic content (as opposed to a higher-intensity face to face therapeutic intervention where a detailed, individualised formulation of a person's difficulties can be developed).

Despite piloting the round 1 questions on 3 people, there were still some issues with the survey. Responses to questions 1 and 3 in round 1 often overlapped, so these two questions were therefore analysed together for the purposes of developing items for round 2. Also, respondents interpreted question 2, related to the language that men use to talk about distress, in different ways. Some provided words such as 'stress', 'overwhelmed', 'tired', while others mentioned styles of communication such as using jokes, withdrawing, or underplaying what is happening. These suggestions overlap considerably with existing literature about men's mental health and the way that difficulties may be expressed. For these reasons, it was decided that these responses would not be put forward to round 2, but instead would be used directly in the development of the intervention, informing the phrasing and potentially any marketing materials.

Some have argued that the definition of expert is subjective, and the small samples often used in Delphi studies may not be representative of all experts on this topic (Freitas et al., 2016). However, it has also been argued that samples over 15 tend not to add value in consensus studies (Murphy et al., 1998) and so this study aimed to recruit people from a range of sectors to improve representativeness among a small sample. Furthermore, it could be argued that using experts from experience would be beneficial for intervention development. Although this

study did not directly target people with lived experience, this was not an exclusion criterion for this study and so it is possible that the sample included those with lived experience of paternal depression. It is indeed invaluable to include the views and opinions of those with lived experience when developing interventions, and this input will be incorporated at other stages of the development process of the new intervention.

6.7 Conclusion

This Delphi study aimed to achieve expert consensus on the components of a CBT-based intervention for paternal perinatal depression by using expert knowledge to elucidate typical areas of distress, key beliefs and behaviours that are present in paternal depression, and potential facilitators and barriers for overcoming symptoms. Some key implications for a new intervention arose from this work and these will be taken forward (see list below). Respondents agreed that covering key areas such as relationship changes, information about baby development, and the importance of social support, would be important. This corresponds with other literature which has highlighted the importance of targeted information at different stages in the perinatal period to reduce stress and improve wellbeing. Respondents also emphasised the importance of a strengths-based approach, with content framed around learning about the fatherhood role rather than overcoming symptoms of depression. Encouraging social connections and a focus on physical health were also highlighted, alongside the need for fathers to be able to select content which is specific to their worries or concerns. Additionally, respondents noted key barriers to help-seeking which may need to be overcome in the wider health system in order to allow fathers to access any intervention.

These findings will contribute to the development of an intervention to support fathers to overcome mild to moderate symptoms of perinatal depression. The next chapter details the way in which these findings are incorporated with other data from this thesis and the wider literature to inform intervention development.

6.8 Implications for the intervention

Based on the findings from this study, the following components may be important to incorporate in an intervention for paternal perinatal depression:

Areas of content:

- Noting a range of possible responses to stress – using jokes, downplaying level of stress, putting on a brave face, headaches or other physical symptoms.
- Brief information about the possibility of maternal mental health difficulties – signs to look out for and helpful responses.
- The partner relationship – improving communication, building a strong parenting alliance, accepting change.
- Wider social connections – linking in with other fathers, testimonials to reduce sense of being the only one.
- Parenting approaches, including noting similarities/differences to own experience.
- Infant development, infant care and attachment.
- Physical health and exercise, including alcohol and substance use. For example, providing normative information, setting goals for change and prompting commitment.
- Negative coping strategies such as anger and irritability, and avoidance and withdrawal - improving bodily awareness, behavioural activation.
- Problem-solving skills for managing challenges in work-life balance.
- Information about symptoms of anxiety and possible responses to a traumatic birth, including ways to find additional support if needed.

Format and approach:

- Use of brief, digestible, highly targeted pieces of information throughout.
- Content framed around becoming a father rather than overcoming symptoms of depression.
- Providing choice about the content accessed to help individualise the intervention.
- Use of a range of terms which men may identify with e.g. stress, feeling overwhelmed, tired, irritable.

CHAPTER 7 - DEVELOPING AN INTERVENTION FOR PATERNAL PERINATAL DEPRESSION

7.1 Introduction

The high prevalence of paternal perinatal depression, along with the well-established data on the adverse impacts on all family members, highlights the need for interventions which can reduce symptoms of depression and improve family wellbeing. Despite the institutional and individual barriers to identifying fathers' mental health needs (as described in Chapters 1 and 4), recent policy to introduce mental health assessment for partners of women with perinatal mental health disorders provides a unique opportunity to detect difficulties and intervene to support fathers. The review undertaken as part of this thesis (Chapter 2 and 3) indicated that there are no existing interventions aimed at fathers with symptoms of depression. This is a significant gap in provision as the perinatal period presents unique challenges for men which mean that standard interventions for depression may not be helpful. Indeed, the nature of the perinatal period has led to the development of adapted interventions for women, along with workforce training to support the delivery of this intervention in primary care mental health services in England.

The aim of this chapter is to bring together the evidence from both this thesis and from the wider literature, to work towards filling this gap in provision by describing the outline of an intervention for paternal perinatal depression.

O'Cathain et al (2019) set out a framework for actions for intervention development based on a consensus exercise informed by literature reviews and qualitative interviews. Their framework further expands on the UK Medical Research Council guidance on developing and evaluating complex interventions (Craig et al., 2013), extending and elaborating on the stages and approaches of development in order to support researchers to focus their efforts. Key actions include: planning the process; engaging stakeholders; reviewing published evidence; drawing on existing theories and articulating programme theory; undertaking primary data collection; considering future implementation; designing and refining the intervention. They emphasise that this is an iterative process rather than a series of steps, and that learning gained from different actions will inform other activities.

The preceding chapters of this thesis have followed this framework - the model of paternal risk pathways in Chapter 1 sets out the different ways in which pre-existing risk factors and paternal experiences during the perinatal period combine to lead to poor mental health outcomes, not only for the father, but for the whole family. This stage of the thesis initiated the process of reviewing published evidence as well as beginning to articulate programme theory i.e. identifying some of the potential targets for an intervention. This set the stage for the subsequent chapters, which included a more detailed review of published evidence related to interventions (Chapters 2 and 3) and the collection of primary data from fathers (Chapter 4 and 5) and from professionals (Chapter 6). Specifically, the studies in this thesis were devised in order to identify the key targets and components of an intervention which can modify the risk pathways and lead to better outcomes for all family members.

This chapter brings the learnings from the previous chapters together and aims to further articulate a programme theory as well as providing the basic design for the intervention. The chapter is divided into two main parts. The first part summarises the different activities of intervention development undertaken as part of this PhD, specifically highlighting the key learning from the systematic review (study 1) and primary data collection (studies 2 and 3). It also includes wider stakeholder engagement undertaken during the time that I have been studying for the PhD, which has contributed to intervention development. The outcomes of these activities are summarised in Table 9. The second part of the chapter draws together this learning, considering it in the context of a CBT-based intervention, and outlining more specifically how the components will be put together in an intervention for PPND. This includes specifying the proposed format, describing useful approaches for initial and ongoing engagement, and setting out the main content and structure. The content is summarised in Figure 8, which provides an overview of the intervention components. Finally, the discussion reviews the main components proposed in the intervention outline and considers the strengths and limitations of this approach.

7.2 Main components

7.2.1 Learning from this thesis

The studies undertaken in this thesis used mixed methods to identify key components of an intervention for fathers, drawing on concepts of triangulation, complementarity and expansion to approach the research question from different angles and provide a rich evidence base from

which to design the intervention. The specific components identified in the three studies and the places where they overlapped and provided unique insights can be seen in Table 9. This table also incorporates learning gathered from stakeholders, described below.

Chapters 2 and 3 reported on the methods and results of a systematic review summarising the evidence from effectiveness studies of interventions for fathers in the perinatal period. The aim was to explore the key components of interventions which impact on outcomes relevant to fathers' mental health, including aspects of paternal distress, the couple relationships and parenting variables. Data from the review were limited by the fact that none of the included studies targeted men with identified mental health needs. Nevertheless, there were some useful learnings about components which were associated with improvements in couple functioning and parenting outcomes. In particular, having a practical, skills-based focus with opportunities for experiential learning was identified as important. Additionally, including a focus on parenting strategies, including both antenatal and postnatal components, and incorporating an element of social support were highlighted as features which were related to beneficial outcomes.

Chapter 4 summarised qualitative data from existing literature on paternal perinatal mental health and men's mental health more generally, including drawing out key features which are relevant to an intervention for PPND. Chapters 4 and 5 then presented the methods and results of a qualitative interview study of men who are engaged in a perinatal programme to reduce violence in their intimate relationships and who present with a range of risk factors for poor mental health. This data explored in more depth issues around uncertainty and confusion in the fatherhood role, the influence of masculine stereotypes, the challenges in the couple relationship, and some of the unhelpful coping strategies that men sometimes employ to deal with difficulties. This data expanded the range of topics to be covered and provided depth to understanding men's needs and concerns.

Chapter 6 described the methods and results of an international Delphi study which aimed to gain the views of clinicians and academics working in the field of fathers' mental health, on what the components and targets of an intervention for PPND should be. Participants highlighted multiple components, including both content topics and elements related to the format and approach of an intervention. Many of these overlapped with data from the previous studies, for example, noting the value of a strengths-based, practical approach and the importance of content on the couple relationship. Additionally, specific elements of the format

were noted here. This included individualising the content, framing the intervention around fatherhood rather than depression, and using brief, targeted information. This both complemented and expanded the existing data.

7.2.2 Stakeholder engagement

A key stage of development described by Cathain et al (2019) is involving stakeholders, including those who will deliver, use and benefit from the intervention. This may involve consultation where meetings or discussions with stakeholders can provide information about the context of the problem or the context in which the intervention would operate. It may also include co-production, whereby stakeholders generate ideas and make decisions about the intervention.

During the time I was undertaking this PhD I met with a range of stakeholders who provided information about aspects of the intervention, both in terms of content and also issues around format and implementation.

As part of a parallel project commissioned by NHS England around supporting the partners of women with PMH disorders (Darwin, Domoney, Iles, Bristow, & Sethna, 2021), I ran a stakeholder day in June 2019, inviting a mixture of UK-based clinicians, academics, and third sector organisations (n=30). This included representatives of health professionals working across the perinatal mental health care pathway (psychiatrist, psychologist, midwife, health visitor), clinical academics who have published extensively in the field of paternal mental health, and representatives from several third sector organisations that work with families and fathers in the perinatal period (including representation from men with their own lived experience of paternal mental health difficulties (n=3)).

Delegates were split into groups and provided with summaries of evidence related to different topics relevant to supporting partners. This evidence was generated from two main sources - a national survey we had undertaken of the views of health professionals, mothers and fathers about the best ways to involve and support partners of women accessing PMH services, and reviews of evidence that we had undertaken about assessment of fathers mental health and the father-infant relationship (Darwin et al., 2020; Siew et al., 2020). Using these summaries and their own knowledge and experience, delegates were asked to generate practice recommendations in their groups which they wrote of pieces of card. These cards where then

shared amongst other groups who were able to comment and add detail, with opportunities for discussion both within and between groups.

Topics relevant to this thesis included: mental health assessment for partners; provision of information for partners; support for the father-infant relationship; and psychosocial interventions for partners. Discussions focused on ways to support partners both with and without mental health needs. Key learning related to this chapter's aims included:

- Men are focused on the needs of their partner and baby, so may need specific incentives to focus on their own mental health and see this as a legitimate thing to pay attention to. Health professionals have a role in promoting the importance of fathers' mental health.
- Providing information in different formats (e.g. both leaflets and online, with videos and text, through discussion with professionals) and at different time points throughout the perinatal period can increase accessibility and relevance.
- Men (and women) benefit from support to be both fathers AND co-parents i.e. it is important to build a strong parenting alliance as well as a positive father-infant bond to enhance family outcomes.
- Fathers often value practical tips and advice about specific ways they can support their partner and baby. Therefore, information about their role during the birth, infant feeding and sleeping, and the needs that their partner may have in the postpartum, can support men to engage in concrete activities to support family wellbeing.
- Peer support is a valuable way to increase social connections and normalise worries.

I applied for funding from the Winston Churchill Memorial Trust to run a further stakeholder day for men with lived experience in June 2020 in order to present current content ideas and gain feedback. The application was unsuccessful, but I will apply for further funding for this purpose in 2021. The intention of this is to bring an element of co-production to the development process. While this has not been possible throughout much of the project due to lack of funding, it is important to involve those with characteristics similar to the target audience to ensure that the content and format are acceptable and to identify any potential barriers. The aim of the future workshop will be to seek feedback on the content described below, and to translate the content into a design and format that is appealing and useful for fathers.

Engagement with colleagues from IAPT about delivery of Step 2 interventions (Paris Capleton, Alaina Husbands and Hannah Reene, practitioners in an IAPT service in London) provided information about current delivery formats. This included formats which are designed to be flexible to meet the needs of those who cannot attend during working hours or who prefer not to attend in person. Specifically, they described how many IAPT services now offer out of hours sessions on the phone, and how many of their Step 2 interventions are now available on online platforms. These platforms allow practitioners to see summaries of the content that clients have accessed or completed and allow clients and practitioners to communicate through messaging boards. The IAPT practitioners I spoke to said that these interventions are popular and that they have engaged male clients (this was personal reflection by the practitioners – they did not provide data about this). These practitioners also explained how Step 2 clients have options for engaging in workshops and non-therapeutic groups (e.g. information or peer support groups) alongside receiving guided self-help interventions.

7.2.3 Summary of components

Table 9 lists the different components that have been identified, separating these into components related to format and approach, engagement, and content. Content is further subdivided into topics related to the individual father, those related to parenting, and those related to relationships. The table also indicates the data sources for each component, highlighting the number of sources that contributed. The text describes more specifically the contributions that different data sources made.

Table 9 - Components of the intervention identified throughout the thesis

Key:

1 - Study 1: Systematic review
2 - Study 2: Qualitative interviews
3 - Study 3: Delphi survey
4 - Qualitative literature on fathers' mental health
5 - Qualitative literature on men's mental health
6 – Stakeholders consulted for this study.

Intervention component		**Data Source**
FORMAT AND APPROACH		
Use an online format with optional informal group The wider literature which was part of the discussions in Study 1 and Study 3 indicated a preference for online formats for fathers. These studies also highlighted the value of peer support. Stakeholders suggested that this would be feasible to implement in current service		1, 3, 6

provision, with online guided self-help being accompanied by optional informal groups.		
Begin in pregnancy and include a postnatal component Qualitative literature indicated that, during the antenatal period, concerns and fears are already beginning to arise for fathers, including memories of past experiences of being parented, which may impact on current parenting. Men are motivated to think about making changes which will protect and support their child and are often seeking information at this stage. Study 2 also highlighted that beginning input during pregnancy ensures that there is time to provide key learning about infant development and emotional regulation before the baby arrives. Including a postnatal component was highlighted in the systematic review (Study 1). This provides fathers with an opportunity to put learning into practice and ensure it is carried through to the postpartum.		1, 2, 4
Use a practical, skills-based approach. A practical, skills-based intervention, with opportunities for experiential learning was highlighted in Study 1 and also in qualitative studies of men's mental health and fathers' mental health. Stakeholders also noted that fathers value practical tips and advice about specific, concrete ways that they can support their partner and baby.		1, 4, 5, 6
Use a collaborative, strengths-based approach Literature on men's mental health has identified that a collaborative, strengths-based approach is more acceptable to men. Similarly, Study 2 reported that a strengths-based approach, which provides ongoing reinforcement for engagement through a focus on tangible improvements in relationships can be highly motivating for new fathers. Study 3 participants were also clear about the benefits of a strengths-based approach rather than focusing on problematic thought patterns.		2, 3, 5
Provide choice Study 3 participants emphasised the value of providing choice about which content to access to individualise the intervention.		3
Use brief, targeted information Literature explored as part of the Study 3 suggested that using brief, digestible targeted pieces of information is valued by fathers.		3

Use different formats Stakeholders suggested providing information in different formats (e.g. both leaflets and online, with videos and text, through discussion with professionals).		6
Synchronise information to the age of the baby Stakeholders also suggested matching information to the developmental age of the foetus/baby to increase accessibility and relevance.		6
Include therapist support Study 2 highlighted that consistent, available support from trusted others helps men to feel safe to explore difficult feelings and experiences. This may be especially the case when there is shame attached to the feelings, and when habitual harmful ways of behaving need to be challenged.		2
ENGAGEMENT		
Clarify the benefits to the mother and baby of gaining support Stakeholders noted how men are focused on the needs of their partner and baby, so may need specific incentives to focus on their own mental health and see this as a legitimate thing to pay attention to. Fathers themselves endorsed this. Qualitative literature on fathers' mental health suggested that highlighting the potential impact of poor parental mental health on the baby could motivate men to focus on their own wellbeing and increase help-seeking. Additionally, positioning help-seeking as a responsible, problem-solving approach to difficulties may help to overcome stigma around asking for support. This was noted in the qualitative literature on men's mental health.		4, 5, 6
Frame content around the transition to fatherhood Study 3 participants suggested that content should be framed around fatherhood rather than depression. In addition, they suggested using a range of terms that men may identify with (e.g. stress, feeling overwhelmed, irritable) rather than talking about symptoms of depression		3
Elicit men's own coping strategies Qualitative literature on men's mental health suggested that eliciting men's own previous or current strategies to manage symptoms can help to engage men's own abilities to overcome difficulties.		5
Make access convenient and flexible		2

Finding ways to make access to support convenient and flexible is important in breaking down barriers, as reported by participants in Study 2. This echoes the literature that suggests using an online format for fathers, which can be accessed at any time.		
CONTENT		
Individual		
Support fathers to recognise their own mental health needs Challenges for fathers' in recognising their own mental health needs was noted by Study 3 participants and in qualitative literature on fathers' mental health. Validating and normalising some of the challenges in the transition to parenthood was noted in Study 3 and also in the qualitative literature on fathers' mental health. This may be one way to support recognition of difficulties. Study 3 participants also suggested identifying a range of responses to stress e.g. using jokes, putting on brave face, headaches and other physical symptoms. This can also help to recognise and acknowledge levels of stress.		3, 4
Support fathers to recognise unhelpful coping strategies Study 3 participants noted a range of unhelpful coping strategies e.g. irritability and avoidance/withdrawal, as well as the use of alcohol and substances, which need to be addressed in an intervention. Participants in Study 2 also discussed these, and noted how recognising them as coping strategies and learning alternatives was helpful in making changes.		2, 3
Include components on physical health and exercise A focus on physical health and exercise was highlighted as important in study 3. This was also noted in the literature on fathers' mental health and men's mental health.		3, 4, 5
Support fathers to understand and challenge the influence of masculine norms on beliefs. The influence of masculine norms on expectations about coping, providing for the family, and seeking support was noted in the qualitative literature on father's mental health. The way that masculine norms impact on emotional literacy and regulation was also noted in the qualitative literature on men's mental health.		2, 4, 5

Enhancing flexibility in the adherence to masculine norms may be a useful approach. Study 2 noted how challenging some of the stereotypes and assumptions about how to behave could provide a wider range of potential coping responses to be available.		
Improve emotional literacy and emotional regulation A focus on emotional literacy and regulation may be particularly important for men with traumatic histories, whose parents may not have provided opportunities to learn these skills. Literature on men's mental health noted how this may also be important for men more generally, as masculine socialisation can impede the ability to identify emotional responses and employ flexible coping strategies.		2, 5
Provide information about other mental health difficulties Study 3 participants suggested providing information about symptoms of other disorders e.g. anxiety and traumatic stress, as these may be prevalent amongst those with symptoms of depression.		3
Support fathers to problem-solve challenges with work-life balance Study 3 participants noted the challenges of managing a work-life balance in the context of inflexible working practices. Problem-solving strategies may support men to deal with this.		3
Infant		
Support fathers to consider and understand the fatherhood role The qualitative literature on fathers' mental health emphasised how uncertainty about their role, both as a partner and a father, can cause stress, including feeling unprepared for the new role and unsure how to balance the different demands it brings. The need to feel useful and needed in the transition to parenthood was also noted.		4
Provide information about foetal/infant development and care Information about infant development and infant care was highlighted by participants in Study 3 and also in literature on fathers' mental health. This can help to reduce stress caused by uncertainty and potentially reduce feelings of exclusion.		3, 4
Include parenting strategies and skills training Parenting strategies and skills training came out as an important component in Study 1 and was also suggested in the qualitative literature on fathers' mental health.		1, 2, 4

Additionally, participants in Study 2 described how providing parenting skills training (for example video feedback approaches) can help to harness motivation for change at the time of becoming a father.		
Support fathers to reflect on their experiences of being parented Qualitative literature on fathers' mental health reported how memories of men's own experience can be triggered during pregnancy and lead to worries. Making links between men's own experiences of being parented and their current symptoms was helpful for the men in Study 2. This helped to explain what was happening and provide a narrative to their experiences. Similarly, Study 3 participants suggested that noting one's own experiences of being parented and comparing this to how you want to parent can be a helpful approach.		2, 3, 4
Relationships		
Strengthen social support networks, especially with other parents and fathers Several authors from papers included in Study 1 saw this as an important feature of their interventions, and Study 3 participants agreed that peer support is helpful. Qualitative literature on fathers' mental health noted the value of social support from other parents to provide realistic advice and share experiences, in order to prepare for the transition to parenthood. Stakeholders similarly emphasised how peer support is a valuable way to increase social connections and normalise worries.		1, 3, 4, 6
Provide practical tips and advice about specific ways to support the partner and baby Information about their role during the birth, and the needs that their partner may have in the postpartum, can support men to engage in concrete activities to support family wellbeing.		6
Support fathers to acknowledge and accept changes to the partner relationship Study 3 participants and qualitative literature on fathers' mental health noted how relationship changes and concerns in the transition to parenthood can be distressing, confusing and lead to lack of support for		3, 4

each other. This is particularly the case where mothers have mental health difficulties.		
Provide information and skills training around couple communication Study 2 described how identifying problematic communication patterns in the couple relationship and learning techniques to break these, may help to manage difficulties that arise across the transition to parenthood. Improving communication patterns was also a feature of several studies in the review, and was seen as a priority in study 3.		1, 2, 3
Provide information about maternal mental health difficulties Men in study 2 noted the importance of this, as well as the need to provide concrete ways to support their partner. They spoke about the distress associated with having a depressed partner, in particular noting feelings of frustration and inadequacy, which could be mitigated by more support around this. Delphi participants suggested keeping information about maternal mental health brief, in order not to detract from men's own needs.		2, 3
Support fathers to build a strong parenting alliance. Stakeholders reported how men benefit from support to be both fathers AND co-parents i.e. it is important to build a strong parenting alliance as well as a positive father-infant bond to enhance family outcomes. Several studies in the review also focused on this aspect of couple functioning as a way to improve outcomes, and Delphi participants noted this as an important component.		1, 3, 6

7.3 Outline of the intervention

This section draws on the previous data, as well as existing theories and wider literature about interventions with fathers to specify the format, content and structure of the intervention.

As CBT-based interventions include particular techniques which are designed to lead to change, a brief explanation of the cognitive behavioural approach is provided before describing how this approach can be adapted in an intervention for PPND.

7.3.1 A cognitive behavioural approach

The cognitive behavioural model of depression (Beck, 1979; Beck, 2011) describes how situational or environmental factors trigger particular thoughts, which are associated with altered behaviours, feelings and physiological responses. The model explains how these 'five

areas' (see Figure 7) act together to maintain depression over time as biases in perception and interpretation of situations lead to cycles of unhelpful behavioural responses, low mood and stress. The model also incorporates relevant biological, psychological and social background factors such as gender and the impact of early experiences on people's attitudes, beliefs and assumptions. These core beliefs colour the day-to-day thoughts and reactions that people have in response to environmental triggers and can contribute to difficulties.

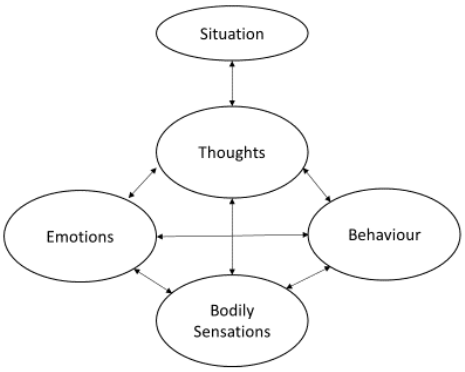


Figure 7 - The five areas model in CBT

The model provides a basis for creating change in a CBT intervention for depression by identifying modifiable targets for change. An early stage of intervention is psychoeducation and idiosyncratic formulation, using the five areas model to identify situational triggers and unhelpful thoughts, and note the links between these thoughts, feelings and behaviour, as well as physiological changes that accompany feeling states. CBT takes a collaborative approach – the formulation of difficulties is devised together and can help to provide some explanation for problems, as well as providing a rationale for the different elements of therapy. Goal setting is also used early in treatment to identify individual aims for therapy and ensure that there are operationalised ways of noting progress.

Following this, key cognitive and behavioural strategies in CBT for depression include:

Behavioural activation and activity scheduling– this is a structured approach to increase engagement in day-to-day activities. It can be used to re-establish daily routines, increase activities which give a sense of pleasure and/or achievement and reduce unhelpful behaviours. This targets deficits in positive reinforcement and increases access to positively rewarding stimuli, supporting the person to take part in actions that are value-driven and to overcome avoidance. One of the main symptoms of depression is anhedonia, and so this is often used early in treatment to help combat this symptom.

Behavioural experiments – these are planned experiential activities, designed to test the validity of the person's thoughts or beliefs and try out new ways of responding which aid the development of more adaptive beliefs. They are linked directly to the individual formulation and developed collaboratively to target specific unhelpful thoughts. Experiments can be powerful ways to challenge people's assumptions (if…then beliefs) and, therefore, elicit cognitive as well as behavioural change.

Cognitive restructuring – this involves identifying unhelpful, repetitive automatic thoughts and finding ways to challenging them, generating alternative, more helpful ways of thinking. There are many techniques that can be used. For example, using thought records or downward arrow questions to identify key thoughts and beliefs; noting the presence of particular thinking styles, such as black and white thinking, jumping to conclusions, comparing to others etc.; using cost/benefit analyses to challenge the usefulness and accuracy of particular thoughts; using positive data logs to strengthen evidence for alternative understandings. These strategies create more flexibility in thinking patterns and shift the focus away from repetitive negative thoughts, helping to generate and strengthen more realistic and helpful cognitions.

In addition to these core techniques, CBT interventions for depression may also include problem-solving, relaxation, visualisation and aspects of mindfulness. These techniques are employed flexibly depending on the needs of the person. As therapy progresses, the aim is to support the person to become their own therapist by increasing understanding about how difficulties arise and learning to employ a range of different strategies to respond to these difficulties, depending on the situation.

As noted in Chapter 1, CBT has a focus on individual experiences (thoughts, behaviours, feelings) and, in the brief formats delivered in Step 2 IAPT interventions, primarily focuses on the present and future. The perinatal period is inherently relational and the shifting family dynamics are a key trigger for stress and uncertainty. Therefore, it is useful to draw from other models of therapy, as is commonly done in CBT-based treatments for mothers (O'Mahen et al., 2013; Trevillion et al., 2020). For example, as described in Chapter 1, it is useful to draw on features of parent-infant interventions and interpersonal therapy e.g. using the voice of the baby and developmental guidance to support the relationship with the baby; communication skills and social network mapping to enhance adult relationships.

7.3.2 Format, approach and engagement

Engagement is a key issue when working with fathers. This is influenced by many things, including aspects of the format of the intervention e.g. how accessible, attractive and easy to use it is; the content of the intervention and whether it is perceived as relevant and useful; and whether there are incentives to remain engaged e.g. identifiable benefits and support from others.

This section describes how the components in Table 9 which are related to format and approach can function within an intervention to enhance engagement, drawing on wider literature to expand on this data, as well as considering elements of the CBT approach.

7.3.2.1 Overall format

Several authors have suggested using online platforms for intervention delivery for fathers, and framing content around optimising fatherhood and parenting as opposed to relief from symptoms of depression (e.g. Rominov et al., 2016; Wong et al., 2016). This was also echoed in data from the studies in this thesis, with Delphi participants recommending a move away from the language of depression, and stakeholders describing the recent increase in use of online platforms to deliver flexible, tailored interventions.

As noted in Chapter 3, there are a number of reasons why online formats are attractive to both fathers and health professionals. In particular, surveys indicate that a majority of fathers are already seeking information about pregnancy and parenting on the internet (Da Costa et al., 2017), and online sources of support can be easily accessed at any time when new parents might otherwise find it hard to schedule appointments or attend groups (Pilkington et al., 2017). Web-based formats can also reduce the burden on health professionals and may reduce the stigma associated with accessing mental health services (Cuijpers et al., 2010; Fletcher et al., 2008; StGeorge & Fletcher, 2011). In the UK, online delivery is feasible to implement as there is already infrastructure in place through the Improving Access to Psychological Therapies programme (see Chapter 1 for more details).

Additionally, online interventions offer opportunities to access content flexibly and in a non-linear fashion, allowing users to choose which modules to explore (Richards et al., 2018). This can be presented as core and optional modules, which cover different topics and incorporate a mixture of information, interactive components that encourage users to consider their own

examples, and suggestions for ways to put things into practice. Key CBT techniques can be woven into modules and online features can allow users to keep notes, save content that is particularly relevant to them, and bookmark pages to come back. These features have successfully been used in other studies of online interventions, including for people accessing IAPT services (Richards et al., 2018) and for perinatal women (Danaher et al., 2012).

However, online formats are less able to provide social support in the form of peer support. This was noted as important across several data sources and may be a significant limitation of online provision for fathers. Nevertheless, stakeholders from IAPT who were consulted about this study reported that psychoeducational and peer support groups can run alongside guided self-help interventions. Therefore, a potential format is for fathers to be able to access a relatively informal group to meet other fathers and receive basic information about the transition to parenthood, as well as participating in a more structured online intervention. In the current climate, this could potentially also be run online, which may reduce some barriers to attendance. This overlaps with suggestions for models of care for fathers proposed by Habib (2012), which described a combination of online information, father-only groups, and options for individual support where needs are greater.

Relevant to this is the data from the studies in this thesis which noted the importance of beginning input during pregnancy and continuing to the postnatal period. This was seen as especially important for families with multiple risk factors for poor child outcomes, as it may take time to engage fathers and begin to make changes. As the support offered needs to meet the developmental and emotional needs of the baby, as well as working on fathers' own wellbeing, beginning early can help to meet these aims. At the same time, data from the review suggested that outcomes may be improved by including postnatal components. This can help to translate learning into tangible behaviours, providing opportunities for experiential learning with the baby. This may mean that input is required over several months to cover both the antenatal and postnatal period. Typically, Step 2 IAPT interventions offer 6-8 contacts with a practitioner. Research suggests that low-intensity guidance provided at intervals of two or more weeks may be preferable than more frequent input for online interventions (Andersson, Carlbring, Berger, Almlöv, & Cuijpers, 2009; Danaher et al., 2013). Therefore, practitioners may be able to support fathers over longer periods of time with occasional input. The addition of informal groups, as described above, can provide additional support in between these contacts.

7.3.2.2 Initial engagement

Several studies have explored ways to increase fathers' initial motivation to engage with online interventions through aspects of the format and delivery (Da Costa et al., 2017; S. J. Lee & Walsh, 2015; Pilkington et al., 2017; White et al., 2016).

Important factors for fathers deciding to access a website for support in the perinatal period include initial motivation and time to visit a father-specific site, perceiving it as being relevant to himself, perceiving the source as credible (i.e. expert in the topic) and knowing that the website is effective and based on scientific knowledge (Da Costa et al., 2017; Fletcher et al., 2019).

As noted in the qualitative literature (Darwin et al., 2020; Rominov et al., 2018) and also by the stakeholders consulted for this study, fathers are often concerned about drawing attention or resources away from the mother and baby and so do not seek help for their own difficulties. However, understanding that their wellbeing has a substantial impact on mum and baby and, therefore, that gaining support is a legitimate way to support the family may be a useful motivator in seeking help (Pirmohamed, 2020; Player et al., 2015). Consequently, reframing engagement with an intervention as a way to help their partner and baby can support initial engagement (although, during ongoing engagement, interventions should highlight the importance of the man's own health and wellbeing). Furthermore, content being focused on understanding fatherhood and improving parenting as opposed to overcoming symptoms of depression is likely to be an important factor in initial engagement (Domoney et al., 2020). As participants in the Delphi study noted, language should be broad and inclusive, using terms such as stressed, tired, irritable, rather than the more formal language of depressive symptoms.

Additionally, clarifying the evidence-based nature of an intervention, including potentially highlighting any co-production activities, may be beneficial to attract fathers.

7.3.2.3 Ongoing engagement

As well as initial motivation to seek help and engage with an intervention, fathers also need incentives and support to continue to engage over time so that they have the opportunity to be exposed to different components of the intervention (Seidler, Rice, River, et al., 2018). While the needs of the mother and baby are likely to continue to be motivating factors, it is also important to shift focus to fathers' own mental health needs and support men to see these as

important in their own right, as well as finding additional ways to maintain interest. Fathers' ongoing engagement with an online intervention is influenced by whether it is easy to use and perceived to have useful information for dads (Pilkington et al., 2017).

In the wider literature on digital therapeutic interventions, therapist support is also considered important (Andersson et al., 2009). It has been shown to increase adherence in online interventions by creating a sense of accountability and reciprocity, especially if motivation is not high at the start of the intervention (Mohr, Cuijpers, & Lehman, 2011). It also provides a safety net and can reduce the sense of vulnerability and isolation by knowing that someone is supporting you (Fletcher et al., 2019). Meta-analyses of internet delivered CBT show that it is more effective when there is therapist input. (Sijbrandij, Kunovski, & Cuijpers, 2016). The guided self-help interventions provided within IAPT services include brief, regular therapist support, and therefore this would be a feature of the intervention if it is delivered in that setting. At the same time, the collaborative nature of CBT means that fathers remain in control of their own progress, helping to engage men as active participants in their wellbeing (Spendelow, 2015a).

This intervention is intended for mild-moderate symptoms of depression and for those who are suitable for a Step 2 IAPT intervention. For men with multiple risk factors, evidence indicates that there is a need for greater therapist input in order to build a trusting relationship over a longer time period. Therefore, where assessment indicates that fathers need a more intensive intervention, Step 3 interventions can be offered (i.e. one-to-one therapy. See Chapter 1 for more details).

To maintain engagement, fathers indicate wanting information in the form of practical tips, that are brief and specific, and delivered in short, summarised formats, perhaps with more detailed information being available in drop down lists/links, if required (S. J. Lee & Walsh, 2015; White et al., 2016). This chimes with the data from study 3 (Delphi study) which also noted the benefits of keeping information brief and providing some choice about which content to access. This is especially the case where concentration and motivation may be impacted by depression, and time and attention may be stretched by the demands of the perinatal period.

Fathers also rate specific features of online interventions such as testimonials, and interactive features, as important to maintain interest (Da Costa et al., 2017; Fletcher et al., 2019). Testimonials from other fathers may be beneficial to normalise some of the challenges of

becoming a father, creating a sense of connection which could combat the isolation often reported. Similarly, stakeholders noted the benefits of providing information in different formats, such as written text, audio and video to maximise opportunities for taking on information.

A survey of fathers by Da Costa et al (2017) highlighted that it is also helpful if an online intervention is rewarding in some way. The study did not specify what this meant in this context. However, positive reinforcement is a fundamental concept in maintaining any new behaviour. This may be especially important for people with symptoms of depression, as loss of interest and pleasure is a key symptom which drives problems. There are different ways to provide rewards. This might include rewarding engagement with the intervention directly, for example, through tailored feedback about progress e.g. regular updates on how many modules or activities have been completed. Alternatively, behavioural activation can be used to create positive reinforcement from the environment. For example, encouragement to spend time playing with the baby, meeting with a friend etc. The fathers in Fletcher et al's pilot study of a SMS intervention for dads highlighted the benefits of prompts to pause and reflect (Fletcher et al., 2019). These could also be rewarding moments, as fathers could be encouraged to consider what they have learned, changes they have noticed, or any ways they could put new skills into practice. These activities fit in with the goal-setting approach of CBT, which provides rewards through noting when pre-specified steps towards goals have been met. As noted earlier, goals and rewards may be in the form of improvements in relationships, perceived changes in the mother or baby's wellbeing, and also, importantly, changes in the fathers' own mental health.

7.3.2.4 Structure, choice and flexibility

For both online and non-online interventions for men, the use of a clear structure has been highlighted as important, with goal-setting, action plans and opportunities for review and feedback, creating a 'road map' to overcoming problems (Seidler, Rice, Oliffe, et al., 2018; Spendelow, 2015a). Suggestions from the men's mental health literature also includes an action-orientated approach, focusing on problem-solving, skills practice and employment of specific strategies to deal with difficulties. These were also key features of the data from the studies in this thesis. Delphi participants highlighted the benefits of a strengths-based approach, while data from across several studies emphasised a practical, skills-based approach as beneficial. As noted above, these features fit well in a CBT framework, which includes goal-setting, problem-solving, and behavioural activation as core elements.

A focus on identifying unhelpful cognitions and acknowledging different feeling states is also important. However, in the men's mental health literature, authors suggest bringing features around expressing emotion in later, while starting with education, information, and practical skills (Mahalik, Good, Tager, Levant, & Mackowiak, 2012). Similarly, adaptations to CBT for women in the perinatal period include introducing behavioural activation before presentation of cognitive strategies, due to challenges with attention that accompany having a baby (Danaher et al., 2013; O'Mahen et al., 2013).

Delphi participants emphasised the importance of having some choice as to the content that is accessed. This can help to individualise the intervention and may increase engagement as men feel more ownership over their own learning and progress (Mahalik et al., 2012). In guided self-help interventions, there is usually a combination of pre-defined content and topics, alongside options for individualising support through, for example, the choice of which topics to focus on, the use of personalised examples and goals, and discussions with the therapist. These features can also be incorporated in online formats. For example, a brief web-based intervention for men with depression in Australia (Fogarty et al., 2017) included examples of helpful coping strategies used by other men, with the user choosing some to try. Furthermore, where strategies were perceived to be successful, these could be saved as part of a personalised 'tool kit', developed over the period of engagement, to be used in challenging moments. Data from the qualitative literature also noted the value of eliciting men's own helpful positive coping strategies, supporting fathers to engage their own abilities to overcome difficulties. Features like this can help to tailor the intervention, maximising its usefulness for individuals with different needs.

Interventions can also be layered to include optional material for those who want to understand more, providing flexibility in the extent to which fathers want to reflect and deepen their understanding. For example, fathers could have the option to consider their own early experiences of being parented and to reflect on their parenting values in this context.

Several authors have also noted the need to have content that is flexible depending on the stage in perinatal period (Fletcher et al., 2017; Venning et al., 2018), and this was also noted by stakeholders. This includes the need to have content that is linked to the developmental age of baby so that it is relevant and matches the changing developmental needs of babies, as well as changing priorities in relationships. For example, the ways that a couple might support each other during the antenatal period may look very different to how they can support each other

postnatally. This can also help fathers to maintain engagement over a period of time, as content changes and more closely matches their needs.

7.3.3 Content and structure

This section describes the main components of the intervention, highlighting specific features and adaptations based on the data summarised in Table 9. It also explores some of the potential mechanisms for change related to these features, which are hypothesised to be related to improved outcomes.

In line with the literature described above, the first modules are focused on providing information and supporting behavioural activation. This ensures that fathers have early opportunities to increase their understanding, particularly in relation to their baby's needs and to managing their own stress, and to start putting things into practice. Therefore, even where fathers do not remain engaged with all components, they will have some take away learning. This content can be classed as 'core' modules, with fathers being directed to these initially, overlapping with 3-4 practitioner contacts. Further modules are focused on developing skills and deepening understanding. This includes more detail about the cognitive behavioural model and how it applies to the individual, as well as opportunities for enhancing relationship skills. Where fathers remain engaged with the intervention, they can be supported to access these modules across subsequent practitioner contacts (3-4). Finally, there is optional material that fathers may choose to access if they have specific needs or want to understand more.

Within each section, content is divided into three headings:

(1) Individual – components that are focused on the individual needs of the father. This includes considering the father's beliefs, behaviours and feelings, as well as his physical health, in the context of becoming a father.

(2) Infant & parenting – components that are focused on the infant and the man's role as a parent. This is a departure from standard CBT and includes providing information about infant development and care, as well supporting fathers to develop a relationship with the foetus/baby.

(3) Relationships – components that are focused on adult relationships, including the couple relationship, the co-parenting relationship and other social connections.

An overview of the structure of the intervention can be seen in Figure 8.

The large, coloured arrows in the background represent the three pathways to improved outcomes: pink for the interventions targeting the father-infant relationship, green for interventions targeting the father's own cognitions and behaviours, and yellow for interventions targeting social and interpersonal aspects of functioning.

The blue boxes along the top of the page show the consecutive stages of the intervention i.e. information and behavioural activation, developing skills and deepening understanding, and optional content. The anticipated outcomes at the end of the intervention period are also included. These indicate what will be the primary and secondary outcomes in any future evaluation.

7.3.4 Psychoeducation and behavioural activation

Providing information to fathers can be empowering – many fathers report that a lack of information contributes to confusion and exclusion. Therefore, increasing their understanding about changes and processes that they may be experiencing in the perinatal period can reduce a sense of helplessness, especially where this is linked to suggestions for tangible behaviours to contribute to family wellbeing.

7.3.4.1 Individual

At an individual level, CBT interventions include psychoeducation around the ways in which thoughts, feelings, behaviours and physiological states are associated. This often forms the beginning stages of therapy, encouraging a sense of curiosity about what is contributing to difficulties and providing the basis for the other tasks of therapy. This can be presented in the context of understanding stress, using examples from other fathers to highlight typical challenges, as well as encouraging users to consider their own personal examples.

Additionally, challenging negative stereotypes about fathers early in the intervention may be especially important to combat unhelpful images or ideas that men may have internalised. This could support identification of beliefs that are creating difficulties.

Several sources of data indicated that more behavioural, skills-based components of the intervention should be emphasised over introspective techniques focused on cognitions. Indeed, Delphi participants suggested that it is not beneficial to focus heavily on negative thoughts. Therefore, while it is necessary to familiarise fathers with the CBT model both to

increase their understanding of their moods and responses and to provide a rationale for the tasks of therapy, behavioural activation and development of coping strategies should be introduced early. This could improve engagement through potentially providing 'quick wins' in fathers' relationships (see sections below), and ensure that, even if fathers only engage for a short period of time, they still have the opportunity to learn some coping strategies.

Fathers can be supported to develop concrete strategies to deal with stress across a range of contexts. As noted in the previous section, Fogarty et al's (2017) web-based intervention for men included examples of helpful coping strategies used by other men, with the user choosing some to try. Where strategies were perceived to be successful, these could be saved as part of a personalised 'tool kit', developed over the period of engagement, to be used in challenging moments. These may include, for example, breathing exercises, 'time out', exercise, connecting with friends (Fogarty et al., 2015; Proudfoot et al., 2015). The development of helpful coping strategies can sit alongside the recognition and reduction of unhelpful strategies, such as withdrawal or alcohol use, supporting fathers to take control over their behaviours in line with their values as a father. The reduction in unhelpful strategies is likely to also benefit close relationships, especially with the mother, and therefore is an added motivation to put this learning into practice. Highlighting the benefits of these behaviour changes for the baby and mother can support motivation to put them into practice (Fletcher et al., 2019).

Physical health and exercise were also identified as important components of an intervention for fathers. As well as being a useful coping strategy which can replace more unhelpful behaviours, exercise is an evidenced-based intervention for depression (Cooney et al., 2013) and is recommended in NICE guidance (National Institute for Health and Care Excellence, 2009). It is thought to function mainly by targeting some of the physiological effects of stress, reducing the stress hormone cortisol and increasing endorphins (Chen, 2013). Additionally, where done in a group format, it can increase social connections, and may impact on self-efficacy through noticing improvements in mood and the mastery of a new skill. This can be introduced early as a coping strategy for stress. Fathers can be supported to increase physical activity through activity scheduling. To increase motivation, suggestions could be made about how to incorporate this into spending time with the baby, for example, taking the baby out for a walk.

7.3.4.2 Infant and parenting

Information about foetal and infant development was highlighted in both the qualitative literature and the Delphi study as something that fathers want and benefit from. Antenatally, this includes information on foetal development and how to prepare for the postnatal period, while postnatally this can include infant care (for example dealing with crying, feeding, sleeping), tips for play and interactions, and knowledge of infant abilities.

Synchronising information with the developmental age of the baby may have multiple benefits. It improves understanding of changes in the baby's signals and behaviour over time. This can be coupled with prompts for how to translate learning into tangible ways to interact, thus increasing confidence in interacting, which is likely to improve overall parental self-efficacy (Hess, Teti, & Hussey-Gardner, 2004). This developmental guidance is often used in parent-infant therapeutic interventions, supporting parents to understand the interactive and cognitive capabilities of infants at different ages. Several authors have noted the importance of fathers feeling valued and included in the perinatal period. Incorporating elements of developmental guidance into the intervention to increase parental self-efficacy could counteract the sense of exclusion that is often felt in relation to bonding (Chin et al., 2011; Rominov et al., 2016).

Knowing the ways in which these age-appropriate interactions benefit the baby may further increase motivation (Fletcher et al., 2019) and can support fathers to understand how important they are to their baby. This is likely to target some of the worries that Delphi participants agreed were problematic for fathers, such as worries about bonding and lack of confidence with the baby.

These mechanisms can be enhanced by using the voice of the baby to provide information, for example, 'I really like it when you make faces at me dad'. This technique is commonly used in video-feedback interventions to enhance the capacity for thinking about the mind of the baby and giving insight into the baby's needs (Juffer et al., 2018). Indeed, in a pilot study of a video-feedback intervention with fathers, participants reported significant differences in their understanding of the baby's thoughts and feelings following the intervention (P. J. Lawrence, Davies, & Ramchandani, 2013). These techniques have also been used in the prenatal period to support fathers' growing understanding of their baby (Alyousefi-van Dijk et al., 2021). Using the baby's voice can also serve to challenge negative thoughts that parents may typically

have, such as the baby is being 'difficult' or the baby does not like them. This may be especially helpful where unhelpful thinking patterns, commonly seen in depression, include the baby.

Timed information that changes across the perinatal period can also provide perspective to challenging moments. A feature of depression is the sense of permanence to the low mood and that things will not change. Highlighting changes in the baby's behaviour over time, including day-to-day patterns of rupture and repair, may serve as a reminder that difficulties are temporary and there are new opportunities for connection and growth each day.

Normalising challenging moments, for example, in relation to infant sleep and feeding is also helpful. Reminding fathers that this is a feature of most parents' experience and providing rationales for why this might be happening may serve to shift negative thinking patterns related to these problems (for example, 'why is this happening to me?' 'what's wrong with our baby?') while providing reassurance. Furthermore, encouraging problem-solving and generating possible coping strategies can increase self-efficacy around dealing with difficulties.

As fathers may engage with the intervention at different stages of foetal development, the intervention will need a way to match the information provided to the individual father. This could simply be done by providing a series of links to information about different age categories. Alternatively, it could be made more interactive by having fathers input the expected due date of their baby, with information becoming available at the appropriate moment. Several apps for parents include this feature (e.g. Baby Buddy, Deave et al., 2019).

Therefore, as well as the timed information about foetal/infant development being presented early on to support engagement and provide fathers with concrete ways to connect with their baby from the outset, this information can continue to be presented throughout the later stages of the intervention as well. Fathers can be supported to reflect on how the relationship is developing and changing over time, and how they wish to parent (see below).

7.3.4.3 Relationships

Acknowledging and accepting change in the couple relationship is a key task of the transition to parenthood. Fathers can be supported to do this through the use of testimonials from other men, normalising typical things that might change over time e.g. sex life, availability to provide emotional support/companionship, stress due to exhaustion. As described above in relation to challenging moments with the infant, this can help to put difficulties into perspective in terms

of their temporary nature, provide reassurance that many couples face similar challenges, and encourage problem-solving and the use of coping strategies to manage emotional responses to change. Navigating role transitions in this way is a key part of interpersonal therapy, which seeks to help people reduce the stress of a transition by acknowledging losses, clarifying positive and negative aspects, noting strong feelings that arise in the transition, and changing interpersonal patterns (Lipsitz & Markowitz, 2013).

Suggestions for practical ways to support the partner at different stages throughout the perinatal period may also help fathers to feel helpful and valued, providing them with a clear role at times when they might otherwise be unsure how to be involved. For some fathers, this might include encouraging attendance at antenatal classes and appointments; giving practical tips about the partner role during the birth; or ways to balance the return to work with continuing to be involved in family life postpartum. Uncertainty about the role of a father was noted in the qualitative literature as exacerbating stress. Therefore, supporting fathers' active involvement alongside identifying and challenging concerns or uncertainties around this may help to increase participation in family life and reduce stress in the couple relationship. Similarly to above, depending on the stage of the perinatal period at which fathers engage, this element of the intervention can be introduced early and then continue over time as needs change.

Improving social connections and creating a strong social network should be encouraged from as early as possible. This can normalise worries, take pressure off the couple relationship (which may have previously been the main source of support), distract from rumination, and potentially support challenges to masculine stereotypes (where men are able to share worries and acknowledge these challenges). Mapping the social network is a helpful way to identify who is around and the qualities of those relationships. This is often used in systemic approaches. It may include identifying family members, friends, colleagues or other acquaintances and considering who may be able to provide different kinds of support. For example, who is good at problem-solving and thinking practically, who is good to have a joke with and relax, who will understand the pressures of having a baby etc. Fathers can set goals to contact people as part of behavioural activation. Where they hold beliefs that may impede them from reaching out and asking for help, behavioural experiments and cognitive restructuring can be used to challenge these beliefs.

In summary, the early stage of the intervention has two main functions: (1) providing information which can increase understanding, normalise worries, and start to challenge

unhelpful beliefs about the role of a father and the relationship with the foetus/baby and partner, (2) using behavioural activation to put learning into practice immediately, including developing new coping strategies for stress, increasing social connections, and finding practical ways to be involved with the family. This stage may include 3-4 contacts with a practitioner to support this learning and trouble shoot any difficulties.

7.3.5 Developing skills and deepening understanding

This stage is an opportunity to continue learning about ways to overcome stress and improve relationships, including increasing understanding of fathers' beliefs and behaviours as well as developing skills to support family wellbeing.

7.3.5.1 Individual

As highlighted in chapter 5, emotional literacy and, subsequently, emotional regulation may be particularly poor in men due to the impact of masculine socialisation, and they are also implicated in the development of psychopathology (Berke et al, 2018). One mechanism for the association with psychopathology is what has been termed 'gender role stress' i.e. a discrepancy between expectations of how one should feel, think or behave in line with gender stereotypes and how one is actually feeling, thinking or behaving. This discrepancy is somewhat inevitable where prevailing masculine norms are constraining, contradictory or inconsistent, and may be particularly salient for fathers if there is tension between masculine stereotypes and the baby's needs for care and nurturance (Madsen, 2009). This stress encourages men to adhere to a narrow range of norms by attempting to deny, avoid and suppress emotions. Good emotional regulation requires the ability to identify the emotion you are experiencing, and then to accept it, and employ a flexible range of strategies to regulate emotional states depending on the context and environment. In contrast, inhibition and avoidance predict dysregulated emotions, for example, increased physiological arousal and subjective distress. This can also lead to the use of maladaptive coping strategies such as alcohol or substance use (Spendelow, 2015).

An intervention for fathers can address these challenges in a number of ways. Emotional literacy training involves learning to recognise and label different emotions. As noted in the Delphi study, this might include noticing a range of responses to stress e.g. headaches, jokes, putting on a brave face etc. Participants in the qualitative study noted the importance of

understanding the triggers and reactions to the fight-flight response. Emotional literacy also involves noting changes in intensity of emotions, which is often done in CBT interventions through a 'subjective units of distress scale' i.e. a scale of 0 to 10 for measuring the subjective intensity of distress.

Within a CBT framework, this learning can be accompanied by noticing the links between thoughts, behaviours and feelings, as well as the physiological correlates of different emotions. This element of therapy may require particular attention and ongoing repetition for men, whose emotional literacy is potentially low at baseline. Madsen also suggests that a focus on anger and withdrawal may be helpful for fathers as these responses may be particularly detrimental in the perinatal period (Madsen, 2009). This was supported by participants in the Delphi study, who also noted alcohol and substance use as unhelpful coping strategies that require attention. Increases in emotional literacy and understanding of the five areas (i.e. behaviour, emotions, cognitions, physiological responses and environment/situation – see Figure 7 above) can support men to recognise their own mental health needs and identify current unhelpful coping strategies which they may struggle with at the start of the intervention. While this can be introduced briefly in the early stage of the intervention, at which point the focus is on behaviour, later stages can explore these concepts more thoroughly, with a focus on beliefs and emotions.

Along with the identification of the five areas, a key part of CBT is challenging unhelpful beliefs which are associated with negative emotions and creating more flexibility in thinking patterns. A focus on cognitive restructuring can be used to address inflexible and rigid forms of masculinity which are perpetuating problems (Spendelow, 2015a). Using testimonials of other fathers may be particularly helpful to normalise challenges and provide models of other men who have found masculine norms restrictive and unhelpful in the transition to parenthood.

Problem-solving is a key part of CBT that can be used by fathers in multiple contexts across the perinatal period. An important context noted by Delphi participants and in the wider literature of fathers is work-life balance. Fathers can be supported to use problem-solving strategies to consider ways that they can manage competing demands on their time. This learning can also be generalised across other contexts, for example, with challenges in the partner relationship (see below).

7.3.5.2 Infant and parenting

Delphi participants suggested a useful component may be an opportunity for fathers to reflect on their own experiences of being parented. However, it is also important to keep input strengths-based and action-oriented. Therefore, this reflection could be used by fathers to consider which elements of their experience they wish to replicate in their parenting and which elements they would do differently. This has been used in individual interventions for mothers (Milgrom et al., 2011; Trevillion et al., 2020) and is also commonly used in parent-infant therapies. This helps to articulate parenting values which may otherwise be implicit, so that fathers can make conscious choices about how to parent. It is also an opportunity for fathers to acknowledge where they did not get their own needs met. In this way, fathers may be supported to separate out the past and the present. Facilitating recognition of these 'ghosts in the nursery' (Fraiberg & Shapiro, 1975), a key element of parent-infant psychotherapy, may be helpful in developing the bond between the father and foetus/infant and in supporting men to consider ways that they can reduce the influence of these experiences on their own parenting (Tolman & Walsh, 2020).

7.3.5.3 Relationships

The studies in the systematic review which showed a beneficial impact on couple outcomes were more likely to include an experiential or practical component (most frequently skills around couple communication and problem-solving), and there was a trend towards those interventions which included an opportunity for discussion. Several guided self-help interventions for perinatal women have found ways to incorporate these features without requiring a face-to-face couple session (Milgrom et al., 2011; Trevillion et al., 2020), and these have been found to be feasible and acceptable. Universal interventions for fathers have also noted how communications patterns can be improved through SMS-based prompts to have conversations (Fletcher et al., 2019). These techniques may therefore also be useful for fathers with symptoms of depression.

Fathers can be encouraged to open up conversations with their partner through the use of prompts to share their learning about the baby. Empowering fathers with information and tips about infant development and parenting increases self-efficacy and may reduce feelings of exclusion. Sharing this learning with their partners in a collaborative way can improve a feeling of teamwork, which is the basis of good co-parenting.

Where fathers struggle with how to do this or come up against blockages due to impaired communication skills, a number of techniques can be used to support them. This may include techniques of communication analysis, drawn from interpersonal therapy. For example, assertive communication training; suggestions for phrases and language to start conversations in a clear, open way; trouble shooting some of the common difficulties that can arise between partners by anticipating these and considering possible responses. CBT techniques can also be incorporated by identifying any unhelpful thinking patterns in relation to partner conversations and challenging these; using relaxation techniques prior to approaching conversations.

Where fathers begin to master these improved communication skills, they can also be encouraged to use these to engage in difficult conversations about disagreements or struggles, helping to avoid conflict and resolve problems in a constructive way. Fletcher et al noted how fathers could sometimes use simple prompts from text messages as motivation to start these conversations (Fletcher et al., 2019). In particular, fathers can be supported to have a conversation with their partner about how they wish to parent their child, potentially including reference to how they themselves were parented. This can open up useful discussions about any similarities or differences between parents and allow a discussion about how they will proceed. This approach to discussing co-parenting has been used in perinatal mental health interventions for mothers (Milgrom et al., 2011; Trevillion et al., 2020). Discussions about parenting are also a key feature of Family Foundations, one of the interventions in study 1 (systematic review) that had a strong evidence base for improved couple relationships through a focus on enhancing co-parenting (Feinberg et al., 2010).

In summary, this stage of the intervention has two main functions: (1) developing a range of skills related to managing emotions and improving relationships (2) deepening understanding about fathers' experiences and emotions. This stage may include 3-4 contacts with a practitioner to support this learning and trouble shoot any difficulties.

7.3.6 Optional content

Where fathers have specific needs or are particularly interested in exploring their experiences further, they can be given the option to access additional material and be given information about where to find more support.

7.3.6.1 Individual

Fathers could be given the option to explore the origins of their difficulties further by examining links between wider experiences, including early life experiences, and current difficulties. Questioning where certain ideas and beliefs have come from and the extent to which they are helpful or match current values can support fathers to make conscious choices in the present in line with their goals. This was noted by fathers in study 2 as a useful way to break habits in their behavioural responses. Where fathers feel that this requires more input, they could be directed to options for face-to-face therapy to explore this further with a professional.

In terms of understanding emotions that arise during the perinatal period, an additional optional section could include expanding learning to other emotions and experiences. For example, fathers can have the opportunity to acknowledge any feelings of shame and stigma related to their experiences in the transition to parenthood. Exposing men to these feelings requires that they have built up a range of coping strategies and that they trust the therapeutic process they are going through. Therefore, this can be introduced once men have started to develop and use helpful coping mechanisms.

Delphi participants suggested inclusion of information and support around other mental health needs such as anxiety disorders and responses to traumatic births. This could also be an optional section of the intervention, which functions to help identify these needs and signpost to alternative sources of support rather than provide intervention.

Early parts of the intervention will include content to reduce alcohol and substance use which are framed as unhelpful coping strategies. For those fathers where there is challenging, an additional section could provide more details about where to access further support.

7.3.6.2 Relationships

While inclusion of information about maternal mental health difficulties did not reach consensus in the Delphi study, some participants highlighted it as particularly important, and this was also noted as important in the qualitative study. Furthermore, poor maternal mental health is a significant risk factor for paternal depression and, therefore, it is likely that this will be relevant for many of the target population of the intervention. This could include brief

information about signs to look out for, things that may be helpful for the mother, and where to get more support.

This intervention is not intended or designed as an intervention for DVA, and families where this is happening need to be supported with appropriate interventions. Nevertheless, components of the intervention can target some of the risk factors for this and contribute to prevention efforts. For example, improving emotional literacy and regulation, as described above, may be helpful. Using problem-solving approaches to deal with difficulties in the relationship and specific skills training in communication, could mitigate some of the risks for aggression. In addition to this, it is important to identify behaviour which may be abusive and encourage fathers to recognise this and seek help. Asking questions such as, 'Are you ever worried or scared by your own behaviour?' 'Do you sometimes feel guilty about ways you behaved?' and providing information about helplines and further support may help men to recognise these problems and seek help.

7.3.7 Summary of main adaptations

While the intervention is based on a cognitive behavioural framework and includes many of the features and techniques used in CBT, there are some key features which are specific to fathers:

- There is a focus on parenting and fatherhood throughout, with examples, testimonials and explanations being based on challenges which are specific to the perinatal period.
- Alongside psychoeducation about men's beliefs and behaviours, there is a substantial amount of information about foetal/infant development and bonding. This is accompanied by suggestions for ways to be involved with and interact with the foetus/baby.
- There is a focus on relationships and social connections, with acknowledgement of how these are likely to have changed alongside concrete ways to manage and enhance these relationships.
- There is content related specifically to the influence of masculine socialisation in the transition to fatherhood and how this can contribute to difficulties.

Figure 8 shows the main intervention components within the three domains i.e. intervention components related to the individual, to the relationship with the foetus/baby, and to adult relationships. These are grouped by stage of the intervention i.e. initial core modules focused

on information and behavioural activation, further modules to develop skills and deepen understanding, and additional optional content. The figure also shows anticipated outcomes in the three domains. While the outcomes are represented in separate boxes, in reality there are interrelationships between them, and they are expected to influence each other. For example, a reduction in couple conflict may decrease symptoms of depression and vice versa. The numbers in orange boxes link to additional detail below the figure about hypothesised impacts of the intervention components which lead to outcomes.

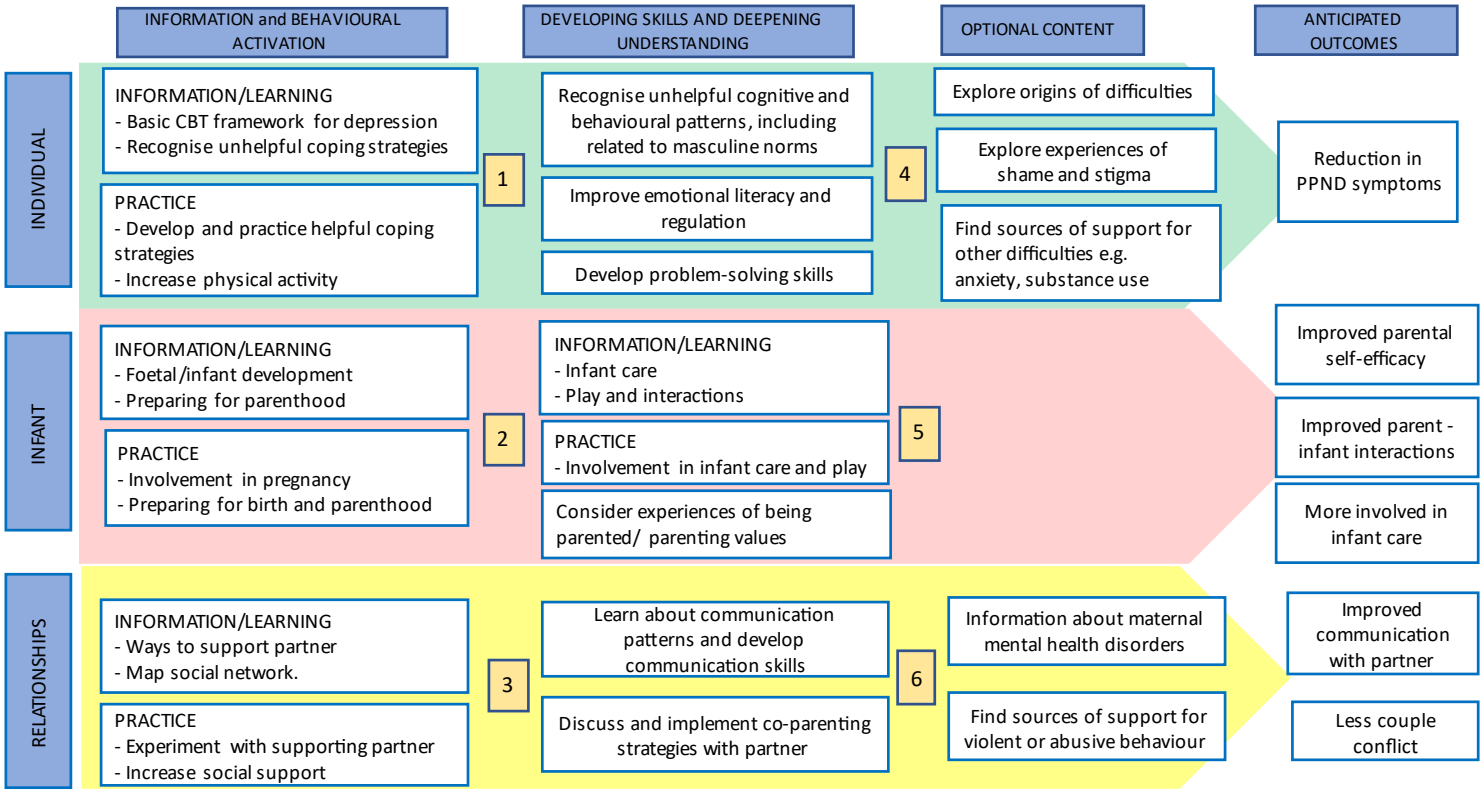


Figure 8 - Intervention outline

1. Understand impact of perinatal period on mood and behaviour; provide a rationale for engagement; provide 'quick wins' for health and relationships.
2. Increase understanding of fathers' role; reduce sense of exclusion; normalise worries about pregnancy/birth; improve sense of value and usefulness as a father.
3. Normalise worries about relationship change; increase involvement in preparation for birth; bolster social support and reduce pressure on partner relationship.
4. Increase recognition and ownership of own patterns; reduce gender role stress; increase self-efficacy for solving problems and changing behaviour.
5. Increase parental self-efficacy and involvement in infant care; reduce impact of 'ghosts in the nursery'; improve quality of father-infant interactions.
6. Increase sense of teamwork and collaboration; empower fathers to engage in challenging conversations and problem-solve difficulties.

7.4 Next steps and evaluation

A key next step is the involvement of men with lived experience in finalising the content and creating an intervention manual. This will be done in collaboration with a group of men with lived experience of perinatal depression. As noted above, I am applying for funding from the Winston Churchill Memorial Trust Activate Fund to run a one-day workshop along with follow-up discussions for this stage. The outcome will be a detailed outline of the content, taking into account the online format i.e. interactive features, format of the information, structure of the pages and links.

Following this, the next stage is to develop the intervention manual into an online format and test the resulting website for usability. Usability testing involves a group of users working through different parts of the website and providing feedback using the 'think-aloud' technique (users verbally report their experience in real time as they are using the website) and structured interviews (Hwang & Salvendy, 2010). This stage can also be used to test the collection and export of website usage statistics such as time spent on each page, activities completed etc. It would be useful to have users who have some similar characteristics to the target group e.g. men who are fathers.

In line with the Medical Research Council's guidance for developing and evaluating complex interventions (Craig et al., 2013), once the intervention is in a usable format, it is ready to be tested in a feasibility trial for both clinical and research feasibility. Key research outcomes are reach and uptake, acceptability, and metrics for estimating parameters in a larger trial. Clinical outcomes include the anticipated outcomes in Figure 8. Given the overall aim of the intervention, the primary clinical outcome would be symptoms of depression, with secondary outcomes being couple relationship quality and father-infant relationship. Measures of specific factors such as parental self-efficacy and couple communication can help to elucidate potential mediators of intervention outcome. In addition, a parallel qualitative process evaluation could investigate the influence of contextual factors on trial and intervention implementation, as well as potentially exploring some of the mechanisms of change which are not identified in questionnaire measures.

If the feasibility study shows that a full trial is warranted, then the intervention can go on to be tested for effectiveness in a fully powered randomised controlled trial to test the hypothesis that it is effective in reducing the symptoms of paternal perinatal depression.

7.5 Discussion

This chapter drew on a wide range of data sources, including primary data collection undertaken as part of this thesis, to provide an outline of a CBT-based intervention which could fill the existing gap in provision for fathers with mild to moderate symptoms of depression. The evidence-based components, which were derived from a systematic review of the literature, qualitative interviews with fathers and a survey of professionals working in the field, alongside wider literature on fathers' mental health and stakeholder consultation, were brought together and described under two main sections: format and engagement, and content and structure. These sections elaborated on how the components could contribute to an intervention, maintaining a basic CBT framework while adapting to the needs of fathers and drawing on other therapeutic models when needed. This approach also aimed to take into account future implementation by detailing an intervention structure and format that is suitable for use in IAPT services.

7.5.1 Format and approach

Approach and format are of particular importance for this population. Men are far less likely than women to access primary care mental health support (Baker, 2020) and fathers typically do not attribute distress to poor mental health. In addition, fathers report feeling that they are not legitimate users of services in the perinatal period, and they are focused on the needs of their partner and baby (Darwin et al., 2017; Rominov et al., 2018). For these reasons, an intervention needs to be focused on the man's needs as a parent and partner and to highlight the associations between his wellbeing and the wellbeing of his family in order to encourage engagement. Furthermore, fathers need to perceive any intervention as credible, relevant and useful, and access needs to be straightforward and flexible. These factors were taken into account in the intervention by proposing an online, guided self-help format with content being framed around the transition to parenthood.

Factors affecting engagement may also include wider service structures and professional biases, such as the remit and culture of services, and the knowledge and confidence of staff (Darwin et al., 2020). Despite the change in policy that will aid identification of fathers' mental health needs, these existing barriers could influence the success of implementation of a new intervention. Future evaluation will need to explore the reach and uptake of the intervention, test levels of engagement and investigate ways to overcome both service-level and individual-level barriers.

The other key factor related to approach is being strengths-based and goal-focused, supporting fathers to take charge of their own wellbeing and to put learning into practice from the early stages. This was a strong feature in studies related to fathers' mental health and also men's mental health more widely (Domoney et al., 2020; Seidler, Rice, Oliffe, et al., 2018). The idea of 'quick wins' i.e. immediate and easy-to-achieve change, is also an established feature used in parenting interventions to provide a motivating experience of success early on in the process (Day, Michelson, Thomson, Penney, & Draper, 2012). This type of approach fits with a CBT model and has the advantage that men who only engage in the first stages of an intervention still have an opportunity to make positive changes in their behaviour. Qualitative feedback as part of a process evaluation will be able to explore how this feature of the intervention is perceived by fathers.

7.5.2 Content and structure

The overall structure of the intervention aimed to engage men early by providing them with information and behavioural tasks as part of initial core modules across three domains: individual needs, parenting, and adult relationships. This was followed by opportunities to deepen their understanding and increase their relationships skills across the same three domains in subsequent modules. It was suggested that this content be supported across 6-8 practitioner contacts, in line with provision in Step 2 IAPT interventions. Finally, optional content was proposed for fathers who want to explore further or have specific needs.

As well as content that overlaps with standard CBT for depression (e.g. learning about the 5 areas, problem-solving, developing helpful coping strategies), key content was focused on the baby, including the role of the father, foetal/infant development, and play

and interactions. This is an essential part of an intervention for fathers. Literature highlights several risk factors for paternal perinatal depression which are related to the baby, for example, a lack of knowledge about infant needs, finding it hard to bond, and feeling unprepared (Baldwin et al., 2018; Giallo et al., 2013; Hanson et al., 2009). Therefore, targeting these factors directly has the potential to significantly reduce stress for new fathers. Future evaluation will be able to quantitively explore infant-related outcomes as mediators of changes in symptoms of depression, with this understanding being complemented by qualitative interviews with fathers.

Similarly, there was a substantial focus on adult relationships, including the partner relationship and wider social connections. These factors have also been reported as key risk factors for perinatal depression (Bruno et al., 2020; Giallo et al., 2013) and are important targets to improve outcomes. Including components that are related both to the couple relationship and also to the co-parenting relationship can help fathers to separate out these roles and attend to both of them across the transition to parenthood. Studies have found this is important for infant outcomes, as the way that couples coordinate and support each other in their parental roles may be more closely related to child outcomes than the quality of the couple relationship itself (McHale & Lindahl, 2011). In terms of wider support networks, a report by Movember suggested that men may not recognise the importance of close relationships for their wellbeing and may lose friendships when they enter fatherhood, increasing their risk for poor mental health (Movember, 2019). Therefore, supporting peer relationships is an important feature. As well as online components related to this topic, stakeholders suggested that optional informal peer support groups could be offered within an IAPT model. As above, future evaluation will be able to explore the feasibility and acceptability of such a group, as well as the mediating role of partner and social relationship quality in reducing symptoms of depression.

7.5.3 Strengths and Limitations

A key strength of the intervention outline proposed in this chapter is the wide evidence base used to identify components. Data sources included quantitative and qualitative data, drawn from both literature reviews and primary data collection, and incorporated evidence from wider literature on men's mental health, infant mental health and digital

health interventions, as well as stakeholder consultation. This provided a rich evidence base from which to develop the content and format, and was in line with the actions set out by O'Cathain et al. (2019) for intervention development. However, a noteworthy omission from the evidence base was the involvement of men with lived experience in the development of the proposed outline. This element is dependent on obtaining funding and, as reported above, a previously unsuccessful funding application to the Winston Churchill Memorial Trust will be submitted again in 2021 with the aim of running a co-production workshop. This will help to strengthen the evidence base and enhance the quality of the intervention outline.

A further strength is the focus on a population who are currently often excluded and side-lined. Fathers report that they are rarely asked about their needs, do not feel like they can legitimately ask for support, and often feel marginalised in the transition to parenthood. Focusing explicitly on their needs and challenges and considering specific intervention components to target these, highlights the importance of the fathers' role in family wellbeing. Study 2, the qualitative interviews with fathers who use violence in their intimate relationships, further focused on a group of men whose voice is rarely heard in research. This added richness to the data. Nevertheless, amongst fathers there are many individual contexts and subpopulations which have not been specifically addressed in the intervention outline. For example, the needs of stepfathers, stay-at-home dads, or non-resident fathers may be different and require more nuanced interventions than is covered here. However, the outline presented in this chapter provides an important starting point and can potentially be adapted and enhanced in future research to meet the needs of specific groups of fathers.

Within the intervention outline there is a substantial focus on the relationship with the baby and encouraging fathers to be more involved with their infants. This is due to the literature which highlights this as a challenge and a source of stress for many fathers. However, this assumption that fathers should be more involved in infant care and that this will be beneficial for all family members may not be the case for all groups. For example, a study of Asian fathers in the UK described tensions between involved fathering and the cultural expectation to be somewhat remote and authoritarian, along with stigma from the wider religious community related to being involved in caregiving (Salway, Chowbey, &

Clarke, 2009). Greater involvement may therefore create challenges of its own. Similarly, some women may be reluctant to relinquish control over aspects of childcare and childrearing and may perceive men's increased involvement as impacting negatively on their autonomy and status as mothers (Shorey, Ang, & Goh, 2018). These contextual factors will benefit from further exploration in future research.

Finally, the intervention outline described above includes details of some of the proposed causal pathways to better outcomes (for example, describing how understanding the changes in the baby's signals and behaviour over time may improve parental self-efficacy). It is helpful to be explicit about these assumptions throughout intervention development and to specify how targeting particular behaviours or cognitions is proposed to lead to change. However, this is a preliminary model, and these causal pathways need to be tested and explored in subsequent research to ensure that the intervention is targeting the most useful behaviours and cognitions.

7.6 Conclusions

This chapter has drawn together evidence from the studies in this thesis, alongside evidence from the wider literature and elements of cognitive behavioural theory, to describe the main components of an intervention for PPND. This includes describing elements of the format and delivery which are intended to improve initial uptake and ongoing engagement, as well as the content and structure of the intervention. Key adaptations from a standard CBT intervention for depression include a focus on parenting and fatherhood throughout; an emphasis on behavioural activation and experiential learning which incorporates the baby and partner; and a focus on relationships and involvement with the family. This intervention outline provides the basis for an online guided self-help intervention which can then be tested for feasibility, acceptability and effectiveness in a future trial.

CHAPTER 8 – DISCUSSION AND IMPLICATIONS

The overall aim of this thesis was to develop an intervention outline for a CBT-based intervention for mild to moderate symptoms of paternal perinatal depression (PPND). This included objectives to: synthesise quantitative evidence on interventions in the field of paternal perinatal mental health to identify potentially beneficial intervention components (Study 1); summarise qualitative evidence on paternal mental health and collect novel interview data from men with multiple risk factors for poor mental health, to identify potential targets for intervention (Study 2); and gather the views of experts in the field of paternal mental health on the components and targets of an intervention to treat PPND (Study 3). Finally, the objective of Chapter 7 was to draw together data from these three studies, alongside existing data and theory related to CBT-based and perinatal interventions, to elucidate the adaptions needed to standard CBT interventions (in terms of format, content and delivery) and describe how these adaptions can bring about change in fathers' symptoms of depression.

In this final chapter, I summarise the main findings of the thesis, highlighting the key results and implications from the three studies and how these were incorporated in a CBT-based framework to describe an intervention for PPND. I then situate these findings within the wider context, considering both research and clinical implications, including highlighting some of the gaps in knowledge and what the next steps might be to overcome these. This includes building on details from Chapter 1 about the potential setting for this intervention and some of the implications for implementation. Finally, I discuss the strengths and limitation of the work in the thesis.

8.1 Summary of findings

This mixed methods study used qualitative and quantitative data to gather evidence for the key components of an intervention for PPND, with a focus on adaptations needed to CBT-based interventions for depression. The aim was to use the concepts of triangulation, complementarity and expansion across the different studies to develop a detailed description of the intervention which included consideration of the overall format, aspects of delivery, and main content.

A key finding was that there are no existing interventions targeted at fathers with mental health needs that have been tested for effectiveness. While study 1 found that many perinatal interventions included fathers or targeted them specifically, and many also included measures of symptoms of depression and anxiety, none were delivered to samples of fathers with identified mental health needs in the perinatal period. This highlighted the dearth of support that exists for fathers and also made it challenging to draw out components that are beneficial for fathers' mental health.

Nevertheless, several pilot studies were found in the database searches which were considering different potential interventions which could target fathers' mental health, indicating that this gap in provision is being recognised. For example, Giallo et al (Giallo et al., 2018) piloted an intervention for fathers in Australia which was focused on physical exercise and peer support. 'Working out dads' is a six-week group programme for fathers of 0–4-year-olds, based in a gym, which includes psycho-education about health and parenting alongside a group gym workout. Fletcher et al (Fletcher et al., 2008), also in Australia, developed 'SMS4Dads', a text-based intervention that sends messages to fathers across the perinatal period, addressing the fathers' relationship with the baby, his relationship with the mother, and his own self-care. Both of these interventions reported promising early findings in terms of feasibility and acceptability. Da Costa et al (Da Costa et al., 2017) report on the development of a website designed to enhance mental health in expectant fathers in Canada through providing them with strategies to prepare for parenthood. As of yet, no further data is available on this study. Despite these advances, all three of these interventions are described as being designed to promote or enhance fathers' mental health rather than being targeted at fathers with symptoms of depression. However, this may be due to the challenges of identifying this population if screening programmes for fathers have not yet been rolled out in Australia or Canada.

In spite of there being no existing interventions for fathers with PPND, study 1 noted aspects of interventions which are helpful in leading to change in couple relationships and infant-related variables, which are associated with PPND. This included provision of support across the perinatal period, a practical skills-based focus, and inclusion of strategies and support for parenting and co-parenting. These elements were expanded on in studies 2 and 3 which drew out further details about these components. For example,

studies 2 and 3 also noted the importance of a focus on parenting, including learning practical skills around infant care and father-infant interaction to harness motivation for change in the transition to parenthood and improve parental self-efficacy. This kind of support can also challenge negative thought patterns around the father's ability to contribute to their child's development and provide reinforcement for ongoing change in the form of the improving relationship with baby. I noted how these elements of an intervention could bring in techniques from the parent-infant literature such as using the voice of the baby, alongside behavioural activation and cognitive restructuring. Stakeholders, who were consulted as part of a parallel project on supporting partners in PMH services (as described Chapter 7), further contributed to these ideas, suggesting that information about parenting be linked to the developmental age of the baby, improving fathers' understanding about their child's needs and providing tips for ways to adjust behaviour in line with the infant's abilities. In terms of evaluation, several possible indicators were noted that could be used to identify these mechanisms, including measures of parental self-efficacy, paternal involvement, and parent-infant interaction.

Providing information which matches the child's age was also relevant to the timing of the intervention. Data from studies 1 and 2 noted the importance of having antenatal and postnatal components. Beginning in pregnancy was considered especially useful for those with higher needs, providing time to shift unhelpful patterns prior to the birth, while postnatal components were described as important to put learning into practice. It was noted that this format may present challenges when fitting in with brief Step 2 IAPT interventions. Therefore, further stakeholder input at the next stages of intervention development will be needed to consider how to overcome this.

The practical focus, which seems especially important for fathers, was also noted in relation to the couple relationship. As well as acknowledging and accepting change, studies 1 and 2 highlighted the value of improving communication skills with partners. This skills training was a feature of several of the studies in the review which showed beneficial impacts on the couple relationship (Daley-McCoy et al., 2015; Feinberg & Kan, 2008; Shapiro et al., 2011). It was suggested that intervention components focused on the partner relationship also incorporate techniques from interpersonal therapy, such as mapping the social network. The need to build a strong parenting alliance was also a

feature across several sources of data. For example, stakeholders (e.g. clinicians, academics and third sector organisations – see Chapter 7 for details) noted how men benefit from support to be both fathers *and* co-parents. The intervention outline described how this could be incorporated alongside reflections on values as a parent.

Several authors of papers in study 1 suggested that social support was an important feature for the fathers in their studies (Gambrel & Piercy, 2015a; Wood et al., 2014). Similarly, Delphi participants and stakeholders agreed that peer support is a helpful intervention. While this is more challenging to incorporate directly into an online intervention, I suggested that the intervention could encourage fathers to reach out to friends, using social mapping to identify people in fathers' networks. Additionally, using testimonials in different formats (e.g. videos) could help to give a sense of connection with other fathers. A further possibility was suggested by stakeholders, who described how informal support groups can be provided in IAPT alongside guided self-help interventions. These groups could provide the peer support from other fathers that was noted as important. In the next stages of intervention development, interviews with users of the intervention could help to elucidate whether these components are successful in improving social connections and reducing a sense of isolation.

Studies 2 and 3 also contributed additional unique insights about components of an intervention. In particular, the impact of adherence to masculine norms and stereotypes, which was noted by participants in the Delphi study, was expanded on in study 2. While the men who participated in the interviews had specific risk factors and backgrounds which might have made this more of a feature, this nevertheless was a significant topic in the men's mental health literature more widely. Furthermore, there is an association between stronger adherence to these norms and psychopathology (Oliffe & Phillips, 2008), with research indicating that masculine socialization impacts on the ability of men to recognise their own needs, on the way men respond to distress (e.g. using aggression or withdrawal), and their ability to express the range of emotions which are part of the transition to parenthood (Berke et al., 2018; Madsen, 2009; Seidler, Rice, River, et al., 2018). Unhelpful coping strategies can also impact negatively on relationships, further exacerbating problems.

Nevertheless, participants in study 3 were clear that an intervention needed to be strengths-based and not have a focus on negative thoughts and problems. Wider literature on men's mental health also suggested that intervention components requiring introspection should come later, with more behavioural components presented first (Mahalik et al., 2012). Therefore, components requiring acknowledgement and consideration of the impact of masculine stereotypes may be best introduced later, once helpful coping strategies have been developed and there has been an opportunity for positive reinforcement of new behaviours. Input from men with lived experience at the next stages of development will be useful to consider exactly when and how to introduce these components.

Ideas about engagement came from several sources. This is particularly important for an intervention for fathers due to the plethora of barriers that exist. Delphi participants, stakeholders, and authors in the wider qualitative literature (Pirmohamed, 2020; Rominov et al., 2018) suggested that individual barriers may be overcome by framing content around fatherhood and clarifying the benefits of engagement to maternal and infant wellbeing. This is rather different to existing interventions for depression delivered in IAPT, whose websites tend to focus on symptoms experienced by individuals. This will therefore be an important adaptation to be explored and tested in a trial, with stakeholder input as to how this can be implemented.

Overall, the studies in this thesis have drawn out several important adaptions for a CBT-based intervention for fathers. Specifically, framing content (examples, testimonials, interactive components) around fatherhood, focusing on building healthy relationships with the baby and partner, and enhancing flexibility in adherence to masculine norms.

8.2 Research implications and future directions

Chapter 7 detailed the next steps in intervention development based on the Medical Research Council's guidance for developing and evaluating complex interventions and on literature on digital health interventions (Craig et al., 2013; Hwang & Salvendy, 2010). This included finalising the manual with input from men with lived experience, translating it into an online format, and then testing it for usability, feasibility, acceptability and, if appropriate, effectiveness. A mixed methods approach that includes

a qualitative process evaluation was suggested as a way to elucidate some of the mechanisms of change and the mediators of impact.

Important considerations for these next stages will be to explore uptake and mechanisms of change for men from different backgrounds and with different needs. This includes culturally diverse samples who may have differing beliefs about fatherhood, as well as fathers with specific characteristics, such as stepfathers or non-resident fathers. Additional research may also be needed to elucidate the needs of a wider range of fathers and partners. A further issue is considering measurement tools for fathers, both for the purposes of identifying the target population and also for measuring change. Some of these issues have been noted in previous chapters, and they are expanded on here.

8.2.1 Cultural and ethnic diversity

Much of the literature discussed throughout this thesis reports on data from narrow samples with relatively little cultural and ethnic diversity. For example, the participants of studies in study 1 (systematic review) were mainly white, educated, married couples. Similarly, several of the qualitative metasyntheses and primary studies discussed in Chapter 4 noted the lack of ethnic diversity in their samples, with most participants being from White backgrounds (Baldwin et al., 2018; Dye, 2020; Lever Taylor et al., 2018; Tolman & Walsh, 2020). Others did not report on the ethnicity of their participants, making it hard to know how representative they were (Fogarty et al., 2015; Proudfoot et al., 2015). Qualitative studies with fathers from other cultural backgrounds (Salway et al., 2009; Williams, Hewison, Wildman, & Roskell, 2013) suggest that there may be both overlaps and differences. For example, one study of African and Caribbean fathers in the UK reported a shift towards more involved fathering in their community alongside ongoing deep-rooted ideals of the man as provider, which could create conflict and confusion (Williams et al., 2013). This is similar to tensions experienced by other fathers. However, the study also highlighted the impact of experiences of racism and deprivation, which could affect involvement. Similarly, a study of Asian fathers in the UK also noted the tensions between involved fathering and the cultural expectation to be somewhat remote and authoritarian. The study described strong conventional perceptions of fatherhood along with stigma from the wider religious community around being involved in caregiving (Salway et al., 2009).

This suggests that there may be some different pressures and challenges amongst men from diverse backgrounds which impact on the transition to parenthood. This are likely to affect initial engagement with an intervention as well as potentially the kind of content which might be useful. Further research is needed with fathers from a range of backgrounds to increase understanding and consider any adaptations or alternative mechanisms of change. This includes samples who are recruited in intervention trials, as well as those who take part in qualitative interview studies.

8.2.2 Other characteristics of parents

There is little specific evidence on the mental health needs of stepfathers or non-resident fathers. Some studies suggest that there may be higher rates of depressive symptoms amongst these fathers (Giallo et al., 2012; Wee, Skouteris, Pier, Richardson, & Milgrom, 2011). However, these samples often also have lower rates of education and employment, poorer couple relationships, and less social support, which are also risk factors for increased rates of symptomatology. The intervention described in this thesis has a substantial focus on developing the relationship with the baby through increased involvement, including both infant care and play. This may be more challenging for fathers who are not living in the same home as the baby or who are not biologically related to the baby, and so adaptations may be required to meet these fathers' needs. Indeed, some of the fathers who participated in study 2 and who did not live with their infants spoke about this. For example, one man noted how he had to build a relationship with his daughter during trips to the park and another man reported feeling that there was a lot of pressure due to the short amounts of time that he had with his son. Saturation was not reached on several themes in this study, perhaps partly due to the range of characteristics that fathers had, which highlights the need for more research on the experiences of these men.

Likewise, as noted in Chapter 1, there is little evidence on the experiences of other partners, such as lesbian, gay, bisexual, transgender and queer (LGBTQ) people regarding mental health in the transition to parenthood. Data is often not collected on the gender or sexual orientation of people who are pregnant or their partners, and so the number of LGBTQ people having babies is unknown. There may be unique risk factors for LGBTQ parents related to stigma, lack of legal recognition as parents, and heteronormative health

services (Alang & Fomotar, 2015). The intervention described in this thesis is directed at male partners due both to the lack of data on other partners and also some of the specific issues that are reported in the literature on men's mental health. It may be that future research can shed light on the areas of overlap and difference in thinking about the mental health needs of partners of birthing women. For example, some of the issues around being excluded and uncertainty about the role may be similar across all partners, while issues related to individual experiences of stigma may look different.

Adoptive parents may also face unique challenges. A recent review found that symptoms of depression and anxiety in adoptive parents were associated with a couple's conception history and aspects of the adoption process (Long, Jones, Jomeen, & Martin, 2021). The review highlighted the particular stresses that these parents face and the need to support individual needs when promoting wellbeing in these families.

8.2.3 Measurement tools

As noted in Chapter 1, further research is also needed into the best tools to use to identify fathers' mental health needs. An evidence synthesis of the performance of mental health screening tools for fathers (Darwin et al., 2020) found that the most frequently used tool is the Edinburgh Postnatal Depression Scale (EPDS; Cox et al., 1987). However, there is considerable debate about the appropriate cut-off for fathers. This has led to researchers recommending a variety of cut-off points: ≥ 11 for depression and ≥ 9 for depression/anxiety (Edmondson et al., 2010); ≥ 10 for depression and ≥ 6 to avoid missing 'any distress' (including depression and anxiety) (Matthey et al., 2001); ≥ 12 for major depression and ≥ 9 for minor/major depression (Massoudi et al., 2013). One difficulty may be that men express depression differently to women and therefore endorse different items on questionnaires. This has led some researchers to develop male-specific measures for depression in fathers (Madsen & Juhl, 2007; Matthey & Della Vedova, 2020), although these have yet to be validated against diagnostic interviews. The evidence synthesis concluded that there was not currently enough evidence to recommend any specific tool and that further studies are needed to improve the accuracy and effectiveness of mental health assessment for fathers in order to identify those in need of support.

This is also relevant to considering measurement of the primary outcome in a research trial. A specific tool and associated cut-off will need to be utilised to identify those who meet inclusion criteria i.e. mild to moderate symptoms of depression. It would be useful to align this with the tool that is likely to be used in clinical practice so that there is continuity between the research and real-world implementation. However, as noted by the evidence synthesis, this requires additional research to ensure reliability and validity of the tools used.

As noted in Chapters 3 and 7, for the purposes of evaluation it will be important to measure other variables of family functioning as well as PPND. These will help to elucidate some of the potential mediators and mechanisms of change within the intervention. This could include parenting variables such as parental self-efficacy, paternal involvement and parent-infant interaction, as well as variables related to couple relationship quality such as communication, satisfaction and dyadic adjustment. Study 1 also highlighted the importance of follow-up measurement beyond the end of the intervention, as some studies found an attenuation of significant effects at follow-up (Halford et al., 2010) while others found that impacts increased over time (M. S. Schulz et al., 2006). The feasibility and acceptability of administering these measures to fathers and collecting follow up data will need to be tested prior to a full trial.

8.2.4 Factors affecting implementation

In the Medical Research Council's guidance for developing and evaluating complex interventions (Craig et al., 2013), implementation is a key phase. This includes taking into account contextual factors which might affect implementation, such as training and support to deliver the intervention, local resources, adaptations made to fit with local contexts, as well as issues around fidelity and reach (Moore et al., 2015).

Considering these factors early in development can aid future implementation by ensuring that there is a good understanding of the setting in which the intervention is intended to be located and what the constraints or barriers to successful implementation might be. While these could also be considered as clinical implications, I discuss them here as it is good practice for these issues to be explored early in intervention development and to be incorporated into evaluation. Indeed, many researchers are now recommending using

hybrid designs for RCTs which measure intervention effects and concurrently assess how interventions are implemented (Schliep, Alonzo, & Morris, 2017).

Proctor et al (Proctor et al., 2011) identified several issues to be explored when conceptualizing successful implementation of a health intervention: acceptability and appropriateness, feasibility, reach, and fidelity and sustainability.

8.2.4.1 Acceptability and appropriateness

Acceptability refers to stakeholders' perception that the intervention is 'agreeable, palatable or satisfactory' (Proctor et al, 2011), while appropriateness is related to the perception of its fit and relevance for a particular problem. These constructs are important both for those delivering the intervention and also those receiving it (i.e. fathers).

Some colleagues and I recently undertook a mixed-methods evidence synthesis on the acceptability of assessment of mental health of fathers (Darwin et al., 2020). The synthesis identified a number of service level, practitioner level and patient level factors which impact on the acceptability of assessment across community and clinical settings. These factors are likely to also be relevant to the implementation of an intervention and would therefore need to be considered during evaluation and any future roll out. For services and practitioners, they included, for example, the remit and culture of the service being geared towards women; the need for training and supervision; staff workload and time pressures; and knowledge, skills and confidence of staff. Future research could usefully explore the impact of these factors by using a pragmatic trial design which includes the views of practitioners and measures of contextual factors in the process evaluation.

For fathers', factors identified in the synthesis included concerns about compromising support for women and the purpose of assessment; and gendered perspectives on mental health alongside an inability to recognize symptoms. Alongside this, acceptability for fathers may include the perception that the intervention is relevant, credible, and useful. As noted in Chapter 7, there are several things that can aid this, for example, being clear that the intervention is evidence-based and framing it around a successful transition to fatherhood rather than symptoms of depression.

Additionally, inclusion of fathers with lived experience in the next stage of development is likely to improve acceptability and credibility with fathers. Using testimonials from those involved in development and including fathers from a range of backgrounds could also support fathers to see it as relevant to them. As with any online content, there is a need to take into account reading age, simple navigation features, and inclusivity in imagery to make it accessible and attractive to as wide a range of men as possible (Andrews, Cuijpers, Craske, McEvoy, & Titov, 2010; Danaher et al., 2012).

Outstanding issues for future implementation include considering variations in acceptability and appropriateness of the intervention for fathers with different needs, for example, first-time fathers as well as experienced fathers, and fathers with specific circumstances, such as stepfathers or those living separately to the mother and baby.

8.2.4.2 Feasibility

This refers to the extent to which an intervention can be carried out in a particular setting. As described in Chapter 1, infrastructure exists in England through the IAPT programme, which is designed to deliver CBT-based interventions for mild-moderate symptoms of anxiety and depression, including in online formats. Furthermore, there is a precedent for adopting adapted interventions for specific populations, including perinatal women. Therefore, this is likely to be the most appropriate setting for an intervention for PPND and there are already referral pathways in place between specialist perinatal mental health services, midwifery, GPs and IAPT.

However, there are some issues with the way that interventions are delivered in IAPT in relation to the proposed intervention. In particular, Step 2 interventions are designed to be brief, often only including 6 to 8 contacts with a therapist. Evidence suggests that it is beneficial to provide input to fathers throughout the perinatal period, beginning in pregnancy and including a postnatal component. Therefore, the way this can be delivered would need to be considered further prior to adoption.

For fathers, key issues relate to whether men are willing to engage with an intervention that is located within a mental health service and whether they have the time to engage (Cuijpers et al., 2010; Da Costa et al., 2017). As noted previously, an advantage of online

delivery is the ability to engage in the intervention remotely, which may remove some of the stigma, and flexibly, which can increase opportunities to use the content.

8.2.4.3 Reach

This refers to the extent to which the target population actually receives the intervention. In the case of fathers, this relies on their mental health needs being successfully identified, a referral for support being made, and fathers being willing to take up the offer. As noted in Chapter 1, mental health assessment for partners of women accessing specialist PMH services is about to be rolled out, and other perinatal services are also exploring ways to assess partners' needs (Baldwin, 2020; NHS England, 2019). However, it is uncertain whether fathers will be willing to take up support due to stigma, time constraints etc. Websites for IAPT interventions tend to talk specifically about mental health. Given the need to focus on fatherhood, rather than depression, and the barriers to engagement related to stigma, marketing strategies will need to be carefully considered. Future evaluation will therefore benefit from substantial PPI throughout in order to do this and will need to explore any barriers to uptake and how to increase the reach of the intervention.

8.2.4.4 Fidelity and sustainability

These are factors related to those delivering the intervention. Specifically, can the intervention be delivered as intended, and is delivery maintained over time? This is important as studies indicate that greater therapist fidelity to internet-delivered CBT in IAPT is associated with improved patient outcomes (Bateup, Palmer, & Catarino, 2020). For the intervention described in this thesis, there may be specific considerations around workforce training to ensure that practitioners understand the key components and the evidence underlying the intervention, as well as having competencies in working with fathers (e.g. understanding the concepts of the perinatal period and having gender competence). This is discussed in more detail in the clinical implications below.

Where peer support/parenting groups are offered alongside the guided self-help intervention, sustainability includes issues around resources (e.g. room space) and ongoing motivation by the local service to provide this element of the intervention. As

above, a pragmatic trial may be able to include exploration of some of these issues. However, it may be that these factors cannot be fully explored until wider scale up of the intervention is underway (Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004).

8.3 Clinical implications

There are several implications for clinical services that are relevant to the development of mental health interventions for fathers. Before noting these, it is useful to briefly review the recent shift towards a 'think family' approach in perinatal mental health services.

The 'think family' approach in health and social care settings is not new (Woodman, Simon, Hauari, & Gilbert, 2020). While it originated in the arena of children's social care as a way to keep the needs of the whole family in mind when working with children and adults with complex needs (Social Exclusion Task Force, 2008), this concept was advocated in the context of perinatal mental health services in the 'All Babies Count' report by the NSPCC in 2013 (Hogg, 2013). This report emphasised the critical role that fathers play in the lives of women affected by perinatal mental illness, as well as drawing attention to the fact that fathers often need support themselves. Since then, work by campaigners such as Mark Williams and the Fatherhood Institute have helped to shed light on the importance of supporting fathers, both to improve men's health outcomes, but also to improve outcomes for the mother and baby. In 2018, Health Education England commissioned the Tavistock and Portman NHS Foundation Trust to develop a perinatal competency framework for health professionals working in perinatal services (Health Education England, 2018). I was part of the expert reference group for this piece of work. The core competency which formed the bedrock of the framework was the 'Perinatal Frame of Mind'. This included the ability 'to understand the father/partner's mental health, and the effect this will have on the mother and the infant' and 'to think about the effect of the pregnancy on the father and other family members' mental health and wellbeing'. This represented an important move towards incorporating the think family approach.

In my own work, over the past several years I have been invited to give talks about fathers' mental health and how to include and work with fathers in a range of clinical forums. This includes the Winchester Training Course for Perinatal Mental Health professionals, my

local Trust PMH team, the National Childbirth Trust and Institute of Health Visiting, and at the international Begin Before Birth seminar. This indicates ongoing and increasing interest in understanding how to involve and support fathers in the perinatal period.

These changes have culminated in the recent Long-Term Plan commitment to implement mental health assessment for partners of women accessing specialist perinatal mental health services, along with the commissioning of guidance about how to involve and support partners (Darwin et al, 2021).

In this context, perhaps the most notable clinical implication is evidence that screening programmes run the risk of not providing any benefit or worsening experiences in the absence of any suitable interventions (Feltner et al., 2018; UK National Screening Committee, 2003). Therefore, there is a pressing need to develop and evaluate interventions alongside assessment. Many perinatal mental health services are beginning to offer couple therapy and family therapy, and a project led by the Anna Freud Centre, called 'Mind the Dad', is piloting ways to offer group interventions to fathers within perinatal mental health services (Anna Freud Centre, 2021). These are welcome changes and could provide much needed support to families. While there is not yet any published data about the impact of these changes, early indications are that they are appreciated by families (personal communication). It will be important for services to find ways to collect data from fathers about their experiences of assessment and intervention and also about their outcomes to ensure that they provide benefits for all members of families (Panter-Brick et al., 2014).

The work in this thesis aims to fill a gap in provision for fathers with mild-moderate symptoms of depression, whether or not their partner is accessing mental health services. While the importance of the couple relationship is acknowledged, fathers indicate wanting support that is specific to their needs and provided separately to the mother, and this intervention is intended to meet this need. Several steps of intervention development and evaluation remain; however, if the adaptations proposed here prove to be effective in alleviating the symptoms of depression in fathers, then this intervention could become available to men identified with mental health needs in the perinatal period. The next sections explore some of the additional clinical implications of these changes towards father-inclusive practice.

8.3.1 Training the workforce

A key issue when considering the implementation of a new intervention is training of the workforce who will deliver it. In this case, a prominent issue is gender competence in health professionals. Practitioners need to be aware of the existing stereotypes around being male, as well as the pressures on men to behave in certain ways and the negative impact of this. As described in Chapters 2 and 7, masculine socialisation is likely to be contributing to and exacerbating the presenting problem (Berke et al., 2018; Mahalik et al., 2012), and challenging this is a component of the intervention. Similarly, practitioners need an awareness of their own gender biases and how they come across in a therapy context. Seidler et al (2018) describe the importance of specific training and supervision around this when working therapeutically with men in order to avoid conforming to hegemonic masculinity norms. Therefore, both supervisors and practitioners will need to undertake this training to maintain fidelity to this approach.

Working in a gender-competent way aligns with the shift towards trauma-informed approaches to mental health care. The term 'trauma-informed' refers to care which encompass the following principles: realizing that trauma affects all aspects of a person's life, including families and communities; recognizing the signs of trauma; responding on a personal and organizational level in a way to promote healing; and providing an environment that resists re-traumatization (Palmieri & Valentine, 2021). A key part of this is ensuring that services are culturally and gender competent (Sweeney, Filson, Kennedy, Collinson, & Gillard, 2018). Integrating cultural factors, including gender, into therapy can significantly improve treatment engagement and satisfaction (Primack, Addis, Syzdek, & Miller, 2010). For example, the practitioners who were delivering the intervention (*For Baby's Sake)* to participants in study 2 had extensive training around trauma-informed care and the gendered nature of DVA, and this approach formed the bedrock of the intervention. Fathers reported how the relationship with the practitioner was an essential part of their journey to change, providing them with a safe space within which to be challenged about unhelpful behaviours.

8.3.2 Primary prevention

As well as pathways for fathers with mental health needs, there is also a need for primary prevention through recognising and addressing wider social factors which impact on fathers' mental health. The qualitative data summarised in Chapter 4 indicates that considerable distress is caused by exclusion from services and uncertainty about the fatherhood role (Gervais et al., 2016; Kowlessar et al., 2015). Father-inclusive practice in maternity and PMH services, along with provision of evidence-based father-focused information, could reduce stress and potentially prevent depression from developing (Darwin et al., 2021).

As noted above, gender competence in those who may be primarily trained in delivering support to women is also important for prevention. There may be unhelpful attitudes about men as peripheral figures in the perinatal period or even as dangerous figures (Whitelock, 2016), which can serve to further marginalise fathers and perpetuate problems.

Challenges around masculine socialization, which discourages expression of emotion and promotes unhelpful responses to distress (Berke et al, 2018), have been a key theme in this thesis. Despite gradual moves towards breaking down gender stereotypes, especially in the context of mental health (e.g. Robertson et al., 2015), many people still hold strong traditional views about masculinity, which are in conflict with the nurturance and care needed by their infants. This can lead to ongoing tensions for fathers in terms of their role in children's lives. Similarly, while being an involved father is the ideal, the reality of social norms and structures (e.g. having to return to work) can serve to keep men in more traditional roles, continuing their exclusion and marginalisation (Machin, 2016). For example, shared parental leave was introduced in the UK in 2015 (Gov.UK, 2015). However, a report by the Fatherhood Institute (Burgess & Davies, 2017) found that men are more likely than women to have requests for flexible working turned down (Olchawski, 2016), and fathers were more likely than mothers to fear that taking leave, or asking to work flexibly, would damage their careers (Working Families, 2017).

Therefore, to support sustained improvements in fathers' mental health, wider social interventions are likely to be necessary, as well as the individualised approach proposed here.

8.3.3 Implications for women

There are several ways in which more support for fathers could benefit women. Research has highlighted the need for fathers to feel useful and valued during the perinatal period. Therefore, the suggested intervention content for this CBT intervention will include ways that fathers can support their partner during the different stages of the perinatal period, for example, their role during the birth. It will also include brief information on maternal mental health difficulties and ways to helpfully respond. Therefore, fathers may have a role in supporting improved maternal wellbeing. Additionally, as noted in Chapter 7, components of the intervention could target some of the risk factors for couple conflict and DVA. For example, using problem-solving approaches to deal with difficulties in the relationship, learning skills in communication, and improving emotional literacy and emotional regulation which could mitigate some of the risks for aggression.

In contrast, some authors have raised the possibility that increased paternal involvement in the perinatal period could risk undermining a role that is valued by women (Åström, 2018). Some women may be reluctant to relinquish control over aspects of childcare and childrearing and may perceive men's involvement as impacting negatively on their autonomy and status as mothers (Shorey et al., 2018). The intervention described in this thesis includes components around couple communication and problem-solving, including in the context of co-parenting, which may support couples to have an open dialogue about this and to negotiate parenting roles that suit both parties. To understand these responses, it will be useful to include mothers in any future process evaluation of the intervention to improve the understanding of the wider context on outcomes.

8.4 Strengths and limitations

The aim of this thesis was to address an important gap in mental health provision by describing in detail an evidence-based intervention for PPND. Fathers report that they are rarely asked about their needs, do not feel like they can legitimately ask for support, and

often feel marginalised in the transition to parenthood. This exclusion and lack of support was highlighted by the fact that study 1 did not find any existing interventions which targeted men with identified mental health needs. With the onset of mental health assessment for partners of women accessing perinatal mental health services in the UK, there is a clear need for evidence-based interventions which can address the specific needs of fathers. The studies in this thesis were designed to take steps towards filling this gap. Furthermore, while a number of international pilot studies have begun exploring mental health interventions for fathers, this thesis was unique in situating an intervention within existing mental health provision in England, taking into account the constraints and opportunities that these services provide.

Using mixed methods and taking a critical realist approach meant that data was drawn from a range of sources to explore the risk factors underlying paternal depression, the mechanisms to poor outcomes, and how these could be targeted in an intervention. This provided a broad evidence base from which to design the intervention, through obtaining data on the views and experiences of fathers, obtaining data on the views of professionals, and synthesising quantitative elements from the review. These different data sources complemented each other and provided both breadth and depth to the data. The thesis also followed the framework set out by O'Cathain et al (2019) for intervention development, ensuring a structured approach to development.

The existing evidence base on risk factors for poor paternal mental health was used in Study 1 to broaden the scope of previous reviews about the impact of interventions on fathers' mental health by also considering interventions for the couple relationship and for early parenting. In this way, variables which are hypothesised to be important mediators of mental health outcomes in the perinatal period (e.g. couple communication, father-infant bonding) were included as potential intervention targets. These relational aspects of the transition to parenthood were expanded on in the other studies and were a key part of the intervention described in Chapter 7, representing important adaptations from standard CBT.

Similarly, as well as drawing on the learning from existing qualitative literature, Study 2 aimed to widen the lens to other groups of men who have risk factors for poor mental health and also risk factors for the wellbeing of their families. As far as I know, this is the

first study to interview fathers, who have been violent in their intimate relationships, about their transition to parenthood in the immediate postnatal period. This was a novel sample who provided rich qualitative accounts of their experiences, both enhancing understanding of existing data as well as adding new insights.

Study 3 drew on international expertise in fathers' mental health to consider aspects of the content and format of an intervention for PPND, exploring the components considered to be most important in supporting men through the transition to parenthood. Added to this data were the views of stakeholders in the UK, including those who would be involved in implementing and delivering a future intervention. These professional views contributed unique insights which were able to take into account local service structures, extensive clinical experience and, for some, lived experience.

These wide range of data sources, which included quantitative and qualitative data, drawn from both literature reviews and primary data collection, and incorporating evidence from wider literature on men's mental health, infant mental health and digital health interventions, as well as stakeholder consultation, provided a rich evidence base from which to develop the content and format of the intervention. Chapter 7 drew on this richness to bring together the evidence-based components into an intervention outline which maintained a basic CBT framework while adapting to the needs of fathers and drawing on other therapeutic models when needed.

Despite these strengths, the work in this thesis has some important limitations, many of which have been touched on in earlier chapters and in the implications for research described above. Some of the key limitations are expanded on here.

8.4.1 Lived experience and expertise

As noted in Chapter 7, perhaps the main limitation is the fact that fathers with lived experience have not yet been involved in conducting this research. While the qualitative literature includes the views of many men and some of the stakeholders included men with lived experience, there is a need to involve fathers in the process of research itself, for example, in the interpretation of the data and in the translation of this data into an intervention. This is especially important given that I am a female researcher and there is

a large qualitative component to this thesis. It is likely that my own views and beliefs have coloured the interpretation of the data and so bringing in other perspectives is necessary.

This also highlights a limitation relevant to study 2 in which questions were not asked specifically about an intervention for depression. Instead, this study focused more on exploring experiences of becoming a father in the context of poor early life experiences and troubled relationships, and also on what had supported fathers to overcome challenges. This drew out some interesting mechanisms and reflections which were used to contribute to the thesis aims but did not home in directly on the key research question. The main reason for this was that it was not part of the inclusion criteria that men had had PPND and they were being interviewed in the context of a different intervention (*For Baby's Sake)*. The opportunity to interview such a unique sample of men meant that novelty of the data and the opportunity to contribute to literature beyond the thesis took precedence. However, this left somewhat of a gap in terms of asking men specifically about features of PPND and what may be helpful to overcome this. Furthermore, as is the case with interview studies of this type, the data may not be generalisable to other fathers and saturation was not reached on all themes, highlighting the complexity of men's experiences. Nevertheless, despite initial uncertainty about how this data might fit within the thesis given the particular nature of the sample, I believe that these interviews made a unique and important contribution to the work. Men with these characteristics are rarely engaged in research and their voices are often not heard. Given the prevalence of DVA, it is essential to increase understanding about what can support change and help families to overcome past traumas.

This issue is also relevant to Study 3 to some extent, as some have argued that the definition of 'expert' is subjective and that the small samples used in Delphi studies may not be representative of all experts in this topic (Freitas et al., 2016). However, a feature of the design of this thesis was to draw on data from a range of sources, so that ideas from one study could be triangulated and expanded on with ideas from the other studies, strengthening the findings and ensuring that views from one data source did not take precedence.

8.4.2 Establishing rigour

A range of measures were used to establish rigour and reduce bias in the research process throughout this thesis. This included, for example, having protocols reviewed and revised by ethics committees for study 2 and 3; having a second person to undertake a percentage of the screening and quality assessment in study 1 and to double code a percentage of the transcripts in study 2; using reflexivity in study 2 to recognise the influence of the researcher and create transparency; using software (NVivo) to manage and record decisions about data in study 2 and 3; using a snowballing sampling technique in study 3 to identify potential participants outside of my own networks. Despite these processes, there were several ways in which bias may have been present in the studies.

Across all studies, only a small percentage of the data were analysed by a second researcher. For example, in study 1 only 20% of titles/abstracts were double screened and in study 2 only 10% of transcripts were double coded. Ideally, all data is screened, rated or coded by a second person to improve reliability. However, this was not possible was due to time and resource constraints.

This also relates to issues of transparency and reflexivity in qualitative research. I was open about my position as a white, female researcher with a background in clinical psychology and an interest in feminist research. This will no doubt have coloured and influenced the work in this thesis. As above, having other researchers involved in analysis and interpretation, including those with lived experience, can mitigate these limitations. This will be an important part of the next stages of the work.

In terms of sampling, only peer-reviewed papers which were written in English were included in study 1. It is possible that this missed studies of interventions which had not been published in peer-reviewed journals or which were published in other languages. Similarly, in studies 2 and 3 sample sizes were small and there was little ethnic and socioeconomic diversity amongst participants. These limitations mean that data may have been missed which could have contributed to the intervention. Indeed, saturation was not reached on several themes in study 2. However, as noted above, the thesis aimed to draw on data from a range of sources, so that gaps in one data source could potentially be filled by another. Further issues related to sampling are described below.

8.4.3 Characteristics of the sample

An additional limitation is the lack of nuance in relation to fathers with unique characteristics. This includes, for example, stepfathers, fathers who are not in a relationship with the mother, parents of premature babies or those born with disabilities. These characteristics may present additional risk factors for poor mental health and these parents may therefore have different needs and require adaptations (Giallo et al., 2012; Wee et al., 2011). For this reason, some of these characteristics were exclusion criteria for the review. However, it will be important for future research to explore the unique needs of these groups and ensure that tailored support can be offered where needed.

Likewise, as discussed above, there is little data on the impact of cultural and ethnic diversity amongst fathers. Some of these issues are likely to arise during the process of evaluation in relation to acceptability and feasibility, including looking at reach and uptake (i.e. which groups are not represented amongst those who engage with the intervention and, where fathers from diverse backgrounds do engage, does their experience differ from other fathers?). This may provide data about ways to engage and include men with wide needs and any adaptations that need to be made.

Also noted above is the fact that there is little evidence on the experiences of lesbian, gay, bisexual, transgender and queer (LGBTQ) people regarding mental health in the transition to parenthood. The intervention described in this thesis is directed at male partners due both to the lack of data on other partners and also some of the specific issues that are reported in the literature on men's mental health. It may be that future research can shed light on the areas of overlap and difference in thinking about the mental health needs of partners of birthing women (Alang & Fomotar, 2015).

Finally, the intervention described in this thesis focused on depression. This is due to the greater amount of research which has been undertaken on this disorder compared to other presentations and also the fact that it is highly prevalent (Paulson & Bazemore, 2010). However, it is recognised that fathers also experience a range of other mental health difficulties that could be addressed in IAPT services, including anxiety disorders and post-traumatic stress (Daniels, Arden-Close, & Mayers, 2020; Leach et al., 2016). There are high rates of comorbidity in anxiety and depressive disorders (Leach et al., 2016), and

it is likely that there is some overlap in intervention components which are effective in addressing these different symptoms. Nevertheless, given that the majority of research has focused on risk factors and correlates of depression, it makes sense to focus initial intervention efforts where this evidence-base exists.

8.5 Concluding remarks

The work in this thesis is timely, given that services are in the process of introducing mental health assessment for partners of women who are accessing perinatal mental health services. Those identified as having mental health needs will benefit from interventions which take into account the unique needs of the perinatal period, a feature which is not present in standard interventions for depression.

Despite the limitations of the existing evidence base on mental health interventions for fathers, the studies in this thesis were able to draw on data from a range of sources to elucidate the key components of an intervention for PPND. This included consideration of the format and delivery, as well as the content and structure. In addition, implementation was considered from the earliest stages, with an online, CBT-based, guided self-help intervention being identified as a format that not only fits well with the specific needs of fathers, but also lends itself to being delivered in existing primary care mental health services.

Key adaptations to standard CBT included framing content around fatherhood and focusing on building healthy relationships with the baby and partner. These adaptations are important for initial engagement with the intervention as fathers often do not recognise their own mental health needs and are reluctant to seek help. Therefore, it is hypothesised that they will be more likely to take up the offer of support where it is perceived as an intervention that will benefit family wellbeing. The adaptations are also important for reducing symptoms of perinatal depression. Both quantitative and qualitative data on fathers' mental health indicate that a poor-quality couple relationship and a lack of knowledge and understanding of their baby's needs are significant contributors to symptoms of depression.

The intervention outline described in Chapter 7 provides a foundation for further stages of development. A key next step is the involvement of men with lived experience to finalise the intervention manual. Following this, the intervention will be available to be translated into an online format and tested for acceptability, feasibility and, if appropriate, effectiveness in reducing the symptoms of paternal perinatal depression. If found to be effective, this intervention could provide an important source of support for fathers and has the potential to improve wellbeing for all family members.

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APPENDICES

Appendix 1 - Changes to systematic review protocol

Following scoping reviews of the literature, the following changes were made to the protocol:

- Only review question 4 was retained (to review evidence from psychosocial intervention studies about the most promising components of an intervention for paternal perinatal distress). This change was made for two reasons: (1) scoping searches indicated that several recent reviews had been published which overlapped with the review aims, and (2) it was decided that it was not feasible to answer all 4 review questions within the timeframe of the PhD.
- The search terms were adjusted to search for primary papers rather than reviews. Due to the focus on review question 4, it was decided that searching for primary papers would provide more detailed evidence which would allow an exploration of intervention components.
- A lower date restriction of 1990 was assigned to ensure that studies were relevant to modern day fathers and services.

Appendix 2 – PRISMA Checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	48
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	NA
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	48
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	49
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	48
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	50-54
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	52
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	53
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	54
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	54

Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	54
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	55
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	55-56
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	57-60

Appendix 3 – Search terms and databases

Database	Search terms	Years searched	Date search was run	Studies identified
Ovid				
PsycInfo	1. randomi#ed controlled trial*.pt. or randomi#ed.ab. or randomly.ab. or trial.ab. or non-randomi#ed.ab. or nonrandomi#ed.ab. or (control adj group*).ab. or (treatment adj group*).ab. or (pilot adj stud*).ab. or evaluation*.ab. or quasi-experiment*.ab. or quasiexperiment*.ab. 2. (father* or paternal* or dad or men or partner) NOT (infertility or fertility or reproductive or genome or HIV).ab. 3. (perinatal or pregnan* or prenatal or pre-natal or antenatal or ante-natal or postnatal or post-natal or postpartum or post-partum or baby or babies or infan* or childbirth).ab. 4. 1 and 2 and 3 5. Limit to Human, English language, Peer-reviewed 6. Limit to 1990-current	1990 to 2018	23.02.18	430
Medline				1155
MIDIRS				512
ProQuest				
BNID	1. randomi#ed controlled trial* or randomi#ed or randomly or trial or non-randomi#ed or nonrandomi#ed or "control group*" or "treatment group*" or "pilot stud*" or evaluation* or quasi-experiment* or quasiexperiment* IN ABSTRACT 2. father* or paternal* or dad or men or partner IN ABSTRACT 3. perinatal or pregnan* or prenatal or pre-natal or antenatal or ante-natal or postnatal or post-natal or postpartum or post-partum or baby or babies or infan* or childbirth IN ABSTRACT 4. 1 and 2 and 3 5. Limit to English language, Peer-reviewed 6. Limit to 1990-current	1990 to 2018	23.02.18	238

Wiley online library				
Cochrane Central	Father* or paternal* or dad or men or partner AND Perinatal or pregnan* or prenatal or pre-natal or antenatal or ante-natal or postnatal or post-natal or postpartum or post-partum or baby or babies or infan* or childbirth. NOT HIV or genome or infertility or fertility or reproductive or smok* or preterm or pre-term	1990-2018	26.02.18	756
EBSCO				
CINAHL	1. randomi#ed controlled trial* or randomi#ed or randomly or trial or non-randomi#ed or nonrandomi#ed or "control group*" or "treatment group*" or "pilot stud*" or evaluation* or quasi-experiment* or quasiexperiment* IN ABSTRACT 2. father* or paternal* or dad or men or partner IN ABSTRACT 3. perinatal or pregnan* or prenatal or pre-natal or antenatal or ante-natal or postnatal or post-natal or postpartum or post-partum or baby or babies or infan* or childbirth IN ABSTRACT 4. Limit to human, English, peer reviewed		23.02.18	513

Appendix 4 – Full text screening: Included and excluded studies.

Included	N=34
Database search N=34 papers from 28 studies	1. Benzies, K., et al. (2008). "Strengthening new fathers' skills in interaction with their 5-month-old infants: who benefits from a brief intervention?" Public Health Nursing **25**(5): 431-439. 2. Bergström, M., et al. (2009) Effects of natural childbirth preparation versus standard antenatal education on epidural rates, experience of childbirth and parental stress in mothers and fathers: a randomised controlled multicentre trial. BJOG **116**, 1167-1176 DOI: 10.1111/j.1471-0528.2009.02144 3. Bergström, M., et al. (2011) A randomised controlled multicentre trial of women's and men's satisfaction with two models of antenatal education. Midwifery **27**, e195-200 DOI: 10.1016/j.midw.2010.07.005 4. Bryan, A. A. (2000). "Enhancing parent-child interaction with a prenatal couple intervention." MCN, American Journal of Maternal Child Nursing **25**(3): 139-144; quiz 145. 5. Coffman, S., et al. (1994). "Effects of clarification of support expectations in prenatal couples." Nursing Research **43**(2): 111-116. 6. Cullen, C., et al. (2000). "Father-infant interactions are enhanced by massage therapy." Early Child Development and Care **164**: 41-47. 7. Daley-McCoy, C., et al. (2015) Enhancing relationship functioning during the transition to parenthood: a cluster-randomised controlled trial. Archives of Women's Mental Health **18**, 681-692 DOI: 10.1007/s00737-015-0510-7 8. Diemer, G. A. (1997). "Expectant fathers: influence of perinatal education on stress, coping, and spousal relations." Research in Nursing & Health **20**(4): 281-293. 9. Doherty, W. J., et al. (2006). "An intervention to increase father involvement and skills with infants during the transition to parenthood." Journal of Family Psychology **20**(3): 438-447. 10. Er-Mei, C., et al. (2017). "Effects of Father-Neonate Skin-to-Skin Contact on Attachment: A Randomized Controlled Trial." Nursing Research and Practice. 11. Feinberg, M. and M. Kan (2008) Establishing family foundations: intervention effects on coparenting, parent/infant well-being, and parent-child relations. Journal of Family Psychology **22**, 253-263 DOI: 10.1037/0893-3200.22.2.253 12. Field, T., et al. (2008) Massage therapy reduces pain in pregnant women, alleviates prenatal depression in both parents and improves their relationships. Journal of bodywork and movement therapies **12**, 146-150 DOI: 10.1016/j.jbmt.2007.06.003 13. Gambrel, L. E. and F. P. Piercy (2015). "Mindfulness-based relationship education for couples expecting their first child-part 2: phenomenological findings." Journal of Marital & Family Therapy **41**(1): 25-41. 14. Gambrel, L. E. and F. P. Piercy (2015). "Mindfulness-based relationship education for couples expecting their first child--part 1: a randomized mixed-methods program evaluation." Journal of Marital & Family Therapy **41**(1): 5-24.

15. Gjerdingen, D. K. and B. Center (2002). "A randomized controlled trial testing the impact of a support/work-planning intervention on first-time parents' health, partner relationship, and work responsibilities." Behavioral Medicine **28**(3): 84-91.
16. Halford, W. K., et al. (2010). "Promoting a positive transition to parenthood: a randomized clinical trial of couple relationship education." Prevention Science **11**(1): 89-100.
17. Hawkins, A. J., et al. (2008). "Increasing fathers' involvement in child care with a couple-focused intervention during the transition to parenthood." Family Relations: An Interdisciplinary Journal of Applied Family Studies **57**(1): 49-59
18. Hung, C. H., et al. (1996). "The effect of child-birth class on first-time fathers' psychological responses." Kaohsiung Journal of Medical Sciences **12**(4): 248-255.
19. Li, H., et al. (2009) A birth education program for expectant fathers in Taiwan: effects on their anxiety. Birth **36**, 289-296 DOI: 10.1111/j.1523-536X.2009.00356
20. Magill-Evans, J., et al. (2007). "Effects of parenting education on first-time fathers' skills in interactions with their infants." Fathering: A Journal of Theory, Research, and Practice about Men as Fathers **5**(1): 42-57.
21. Matthey, S., et al. (2004). "Prevention of postnatal distress or depression: an evaluation of an intervention at preparation for parenthood classes." Journal of Affective Disorders **79**(1-3): 113-12
22. Petch, J. F., et al. (2012). "A randomized controlled trial of a couple relationship and coparenting program (Couple CARE for Parents) for high- and low-risk new parents." Journal of Consulting & Clinical Psychology **80**(4): 662-673.
23. Pfannenstiel, A. E. and A. S. Honig (1995). "Effects of a prenatal "Information and Insights about Infants" program on the knowledge base of first-time low-education fathers one month postnatally." Early Child Development and Care **111**: 87-105.
24. Righetti, P. L., et al. (2005). "Maternal/paternal antenatal attachment and fourth-dimensional ultrasound technique: a preliminary report." British Journal of Psychology **96**(Pt 1): 129-137.
25. Ross, M. K. (2001). "Fathercraft. Promoting the transition to first-time parenthood." British Journal of Midwifery **9**(9): 562-566.
26. Salonen, A. H., et al. (2011). "Effectiveness of an internet-based intervention enhancing Finnish parents' parenting satisfaction and parenting self-efficacy during the postpartum period." Midwifery **27**(6): 832-841.
27. Salonen, A. H., et al. (2008). "Development of an internet-based intervention for parents of infants." Journal of Advanced Nursing **64**(1): 60.
28. Scholz, K. and C. A. Samuels (1992). "Neonatal bathing and massage intervention with fathers, behavioural effects 12 weeks after birth of the first baby: The Sunraysia Australia Intervention Project." International Journal of Behavioral Development **15**(1): 67-81.
29. Shapiro, A. F., et al. (2011). "Bringing baby home together: examining the impact of a couple-focused intervention on the dynamics within family play." American Journal of Orthopsychiatry **81**(3): 337-350.

	30. Thome, M. and S. B. Arnardottir (2013). "Evaluation of a family nursing intervention for distressed pregnant women and their partners: a single group before and after study." Journal of Advanced Nursing **69**(4): 805-816. 31. Tohotoa, J., et al. (2012) Can father inclusive practice reduce paternal postnatal anxiety? A repeated measures cohort study using the Hospital Anxiety and Depression Scale. BMC Pregnancy and Childbirth **12**, 75 DOI: 10.1186/1471-2393-12-75 32. Tohotoa, J., et al. (2011). "Supporting mothers to breastfeed: the development and process evaluation of a father inclusive perinatal education support program in Perth, Western Australia." Health Promotion International **26**(3): 351-361. 33. Wöckel, A., Schafer, E., Beggel, A., Abou-Dakn, M., 2007. Getting ready for birth: impending fatherhood. Br. J. Midwifery 15, 344–348. 34. Wood, R. G., et al. (2014). "The long-term effects of building strong families: A program for unmarried parents." Journal of Marriage and Family **76**(2): 446-463.
Citation tracking of included papers and other reviews N=6	1. Hall, W. A., Hutton, E., Brant, R. F., Collet, J. P., Gregg, K., Saunders, R., et al. (2015). A randomized controlled trial of an intervention for infants' behavioral sleep problems. *BMC pediatrics, 15*(1), 181. 2. Schulz, M. S., Cowan, C. P., & Cowan, P. A. (2006). Promoting healthy beginnings: A randomized controlled trial of a preventive intervention to preserve marital quality during the transition to parenthood. *Journal of consulting clinical Psychology and Psychotherapy, 74*(1), 20. 3. Hauck Y., Cooper, C., L, L., Ronchi, F., & Foley, J. (2015). Blokes talking with blokes: feasibility of a 'dads-only' session within an Australian parent education programme. *Evidence Based Midwifery, 13*(3), 100. 4. Cheng, C. D., Volk, A. A., & Marini, Z. A. (2011). Supporting fathering through infant massage. *The Journal of perinatal education, 20*(4), 200-209. 5. Latifses, V., Estroff, D. B., Field, T., & Bush, J. P. (2005). Fathers massaging and relaxing their pregnant wives lowered anxiety and facilitated marital adjustment. *Journal of bodywork and movement therapies, 9*(4), 277-282. 6. Pretoruis, D. H., Gattu, S., Ji, E.-K., Hollenbach, K., Newton, R., Hull, A., et al. (2006). Preexamination and postexamination assessment of parental-fetal bonding in patients undergoing 3-/4-dimensional obstetric ultrasonography. *Journal of Ultrasound in Medicine, 25*(11), 1411-1421.
Excluded	N=21
Database search	**No father outcomes**

N=10	1. Salmela-Aro, K. (2012). "Transition to parenthood and positive parenting: Longitudinal and intervention approaches." European Journal of Developmental Psychology 9(1): 21-32. 2. Symon, A. and J. Lee (2003). "Including men in antenatal education: evaluating innovative practice." Evidence Based Midwifery 1(1): 12-19. **Not HIC** 3. Charandabi, S. M.-A., et al. (2017). "The effect of life style based education on the fathers' anxiety and depression during pregnancy and postpartum periods: A randomized controlled trial." Community Mental Health Journal **53**(4): 482-489. **Not perinatal** 4. Bunston, W. (2013). "'What about the fathers?' Bringing 'Dads on BoardTM' with their infants and toddlers following violence." Journal of Family Studies **19**(1): 70-79. 5. Iles, J. E., et al. (2017). "Adapting and developing a video-feedback intervention for co-parents of infants at risk of externalising behaviour problems (VIPP-Co): A feasibility study." Clinical Child Psychology and Psychiatry **22**(3): 483-499. 6. Matthey, S., et al. (2015). "Enhancing partner empathy and support in the postnatal period: Impact of a communication and empathy resource on sub-optimal communicators." International Journal of Mental Health Promotion **17**(2): 113-125. 7. Matthey, S., et al. (2008). "Developing partner awareness and empathy in new parents: The Great Parents' Quiz." International Journal of Mental Health Promotion **10**(3): 5-16 **Not in English** 8. An, H. and K. Bang (2014) Effects of Newborn Care Education for First-time Fathers on Their Knowledge and Confidence in Newborn Care at Postpartum One Month. Journal of korean academy of nursing **44**, 428-436 DOI: 10.4040/jkan.2014.44.4.428 **Not psychosocial** 9. Waldenstrom, U. (1999). "Effects of birth centre care on fathers' satisfaction with care, experience of the birth and adaptation to fatherhood." Journal of Reproductive and Infant Psychology **17**(4): 357-368. **Not correct outcome** 10. Abbass-Dick, J., et al. (2015). "Coparenting Breastfeeding Support and Exclusive Breastfeeding: A Randomized Controlled Trial." Pediatrics **135**(1): 102-110. **Pilot studies and protocols**

	11. Pilkington, P. D., Rominov, H., Milne, L. C., Giallo, R., & Whelan, T. A. (2017). Partners to Parents: development of an online intervention for enhancing partner support and preventing perinatal depression and anxiety. *Advances in Mental Health, 15*(1), 42-57. 12. Mackert M., Guadagno, M., Lazard, A., Donovan, E., Rochlen, A., Garcia, A., & Damásio, M. J. (2017). Engaging men in prenatal health promotion: a pilot evaluation of targeted e-health content. *American Journal of Men's health 11*(3), 719-725. 13. Lawrence, P. J., et al. (2013). "Using video feedback to improve early father-infant interaction: a pilot study." *Clinical Child Psychology & Psychiatry* **18**(1): 61-71. 14. Ateah, C. A. (2013). Prenatal parent education for first-time expectant parents: "Making It Through Labor Is Just the Beginning?". Journal of Pediatric Health Care, 27(2), 91-97 15. Bourget, M., et al. (2017). "An Educational Intervention to Support the Development of a Sense of Mastery of the Anticipated Paternal Role in Expectant Fathers: A Clinical Project." *Journal of Perinatal Education* **26**(1): 23-36. 16. Fletcher, R., et al. (2008). "The evaluation of tailored and web-based information for new fathers." *Child: Care, Health & Development* **34**(4): 439-446. 17. Waterston, T. and B. Welsh (2006). "Helping fathers understand their new infant: a pilot study of a parenting newsletter." *Community Practitioner* **79**(9): 293-295. 18. Trillingsgaard, T., et al. (2015) The Family Startup Program: study protocol for a randomized controlled trial of a universal group-based parenting support program. BMC Public Health **15**, 409 DOI: 10.1186/s12889-015-1732-3 19. Takehara, K., et al. (2016) Study protocol for a randomised controlled trial to test the effectiveness of providing information on childbirth and postnatal period to partners of pregnant women. *BMJ Open* **6**, e011919 DOI: 10.1136/bmjopen-2016-011919
Citation tracking N=2	**Not perinatal** 1. Cowan et al, 2014 **Case study only** 2. Lohan et al, 2015

Appendix 5 – Extraction form headings

Authors
Country
Design
Type of intervention
Intervention format
Target group
Summary of intervention
Intervention duration
Setting
Sample (n)
Demographics
Father only
Measures
Time points
Outcome
Impact on Mental health
Impact on Couple relationship
Impact on parenting
Quality rating
Detail of results

Appendix 6 – Quality appraisal for included studies

Quality appraisal item*	1	2	3	4	5	6	7	8	9	10	11	Total	
Bergstrom et al	1	1	1	0.5	1	1	1	0	1	1	1	9.5	Good
Bryan et al	1	1	1	1	0	1	0	0	0	1	0	6	Poor
Cheng et al	1	1	0	0	0	1	0	0	0	0	1	4	Poor
Coffman et al	1	1	1	1	0.5	0	1	0	0	0	1	6.5	Mod
Cullen et al	1	1	1	1	0.5	0	0	1	1	0	1	7.5	Mod
Daley-McCoy et al	1	1	1	1	1	1	0	0	1	1	1	9	Good
Diemer et al	1	1	1	1	0	1	0	0	1	1	1	8	Mod
Doherty et al	1	1	1	1	1	1	1	0	1	1	1	10	Good
Er-Mei et al	1	1	1	1	1	1	0	0	1	0	1	8	Mod
Feinberg et al	1	1	1	1	0.5	1	1	0.5	1	1	1	10	Good
Field et al	1	1	0	1	0.5	0	0	0	0	0	0	3.5	poor
Gambrel & Piercy	1	1	1	1	0.5	1	0	0	1	1	0.5	8	Mod
Gjerdingen et al	1	1	1	1	1	1	1	0	1	1	0	9	Good
Halford et al	1	1	1	1	1	1	0	0.5	1	1	1	9.5	Good
Hall et al	1	1	1	1	1	1	1	1	1	1	1	11	Good
Hauck et al	1	1	0	1	0	1	1	0	0.5	0.5	0.5	6.5	Mod
Hawkins et al	1	1	1	1	0	1	0	0	1	0	1	7	Mod
Hung et al	1	1	1	1	0	1	0	0	1	0	1	7	Mod
Latifses et al	1	1	1	1	0.5	0	1	0	1	1	0.5	8	Mod
Li et al	1	1	1	1	0.5	1	1	0	1	0.5	1	9	Good
Magill-Evans et al	1	1	1	1	1	1	1	1	1	1	1	11	Good
Matthey et al	1	1	1	1	0.5	0	1	0.5	0.5	1	0.5	8	Mod
Pfannenstiel et al	1	1	0	1	0.5	0	0	0	0	?	0.5	4	Poor
Pretoroius et al	1	1	0	1	0	0.5	1	0	0	0	1	5.5	Poor
Righetti	1	1	1	0	0.5	1	0	0	0.5	0	1	6	Poor
Ross et al	1	1	0	0	0.5	0	0	0	0	0	0	2.5	Poor
Salonen et al	1	1	1	0.5	0	0	0	0	0	0	1	4.5	Poor

Scholz et al	1	1	0	1	0.5	1	0	1	0	0	1	6.5	Mod
Schulz et al	1	1	1	1	1	1	0	0	1	1	1	9	Good
Shapiro et al	1	1	1	1	0.5	0.5	0	0	1	1	1	8	Mod
Thome et al	1	1	0	1	0	1	0	0	0	0	0	4	Poor
Tohotoa et al	1	1	1	1	0.5	0	1	0	0	1	0	6.5	Mod
Wockel et al	1	1	0.5	1	0.5	0	1	0.5	0	1	0	6.5	Mod
Wood et al	1	0.5	1	1	0.5	0	1	0	0	1	1	7	Mod

6 or less=poor; >6-8 = mod; >8 = good

*

1. Did the trial address a clearly focused issue?
2. Were outcomes to be measured clearly described?
3. Were characteristics of patients clearly described?
4. Were interventions clearly described?
5. Was the assignment of patients randomised?
6. Were all the patients accounted for?
7. Did the study have sufficient power to detect effects?
8. Was there blinding of participants/ researchers?
9. Were the groups similar at the start?
10. Were the groups treated equally?
11. Have treatment effects been appropriately described?

Appendix 7 – Table of intervention components and outcomes

Study	Timing (ante, peri, postnatal)	Group/individual, couple/father	Intensity of input	Father only component	Delivery format									Content topic												Impact		
					Didactic/educational	Experiential/practical	Discussion	Worksheets/handouts	Demonstrations/videos	Homework	Birth preparation	Pregnancy massage	Own emotions and thoughts	Role of father	Conflict management	Problem solving	Communication	Managing expectations	Parenting strategies	Infant care	Infant development	Parent-infant interaction	Infant massage	Mental Health	Couple relationship	Parenting
Bergstrom, 2009	AN	GC	3	N		X	X	X		X	X			X										0	NA	NA
Coffman et al, 1994	AN	GC	1	N			X	X						X			X	X						0	0	0
Cullen et al, 2000	PN	IF	2	Y		X			X	X													X	NA	NA	1
Daley-McCoy, 2015	AN	GC	1	N		X	X									X	X	X						1	1	NA
Diemer, 1997	AN	GC	3	N			X			X	X									X				0	1	NA
Doherty et al, 2006	Peri	GC	3	N	X	X	X		X					X	X	X	X	X	X	X	X			NA	NA	1
Er-mei et al, 2017	PN	IF	2	Y		X														X		X		NA	NA	1
Feinberg & Kan, 2008	Peri	GC	3	N	X	X	X	X	X				X		X	X	X	X	X					0	1	1
Gambrel & Piercy, 2015	AN	GC	3	N	X	X	X			X			X				X							1	1	NA
Gjerdingen & Center, 2002	AN	GC	2	N			X	X									X	X						0	0	NA
Halford et al, 2010	Peri	IC	3	N	X	X		X	X	X	X				X	X	X	X		X	X			0	0	NA

Hall et al, 2015	PN	GC	2	N	X			X	X	X							X	X	X	X			0	NA	NA
Hauck et al, 2015	AN	GF	1	Y		X	X	X							X				X				0	NA	0
Hawkins, 2006	AN	GC	2	N			X	X	X	X					X	X	X						NA	0	NA
Hung et al, 1996	AN	GC	3	N	X		X		X		X			X									0	NA	NA
Latifses et al, 2005	AN	IC	2	N		X		X		X		X											1	1	0
Li et al, 2009	AN	GC	2	N	X	X	X			X	X			X									1	NA	NA
Magill-Evans et al, 2007	PN	IF	2	Y			X	X	X									X		X	X		NA	NA	1
Matthey et al, 2004	AN	GF	1	N	X		X	X							X		X						0	NA	0
Scholz & Samuels, 1992	PN	IC	1	N		X		X	X	X									X			X	1	1	1
Schulz et al, 2006	Peri	GC	3	N		X	X							X		X	X	X	X				NA	1	NA
Shapiro & Gottman, 2005	AN	GC	3	N	X	X	X		X					X	X		X		X		X		1	1	NA
Tohotoa et al, 2012	AN	GF	1	Y			X	X						X		X		X		X	X		1	NA	NA
Wockel, 2007	AN	GF	1	Y			X	X			X			X									1	NA	NA
Wood et al, 2012	Peri	GC	3	N			X								X		X				X		1	0	0
																				Total			19	13	11
																				Impact			9	8	6
																				No impact			10	5	5

Key

Timing: An = Antenatal; PN = Postnatal; Peri = perinatal

Group or individual: GC = groups couples; IC = individual couples; GF = group fathers; IF =individual fathers

Intensity of input: 1 = 1 session; 2 = 2-4 sessions/hours; 3 = >4 sessions/ hours

Appendix 8 – COREQ Checklist

Topic	Item No.	Guide Questions/Description	Page No
Domain 1: Research team and reflexivity			
Personal characteristics			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	150
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	153
Occupation	3	What was their occupation at the time of the study?	153
Gender	4	Was the researcher male or female?	153
Experience and training	5	What experience or training did the researcher have?	153
Relationship with participants			
Relationship established	6	Was a relationship established prior to study commencement?	154
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	147
Interviewer characteristics	8	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	-
Domain 2: Study design			
Theoretical framework			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	159
Participant selection			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	146
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	147
Sample size	12	How many participants were in the study?	146
Non-participation	13	How many people refused to participate or dropped out? Reasons?	146
Setting			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	146
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	148
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	163
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	149
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	No
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	151
Field notes	20	Were field notes made during and/or after the inter view or focus group?	No
Duration	21	What was the duration of the inter views or focus group?	151
Data saturation	22	Was data saturation discussed?	151
Transcripts returned	23	Were transcripts returned to participants for comment and/or correction	No
Domain 3: analysis and findings			
Data analysis			
Number of data coders	24	How many data coders coded the data?	162

Description of the coding tree	25	Did authors provide a description of the coding tree?	No
Derivation of themes	26	Were themes identified in advance or derived from the data?	160
Software	27	What software, if applicable, was used to manage the data?	160
Participant checking	28	Did participants provide feedback on the findings?	No
Reporting			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	Yes
Data and findings consistent	30	Was there consistency between the data presented and the findings?	Yes
Clarity of major themes	31	Were major themes clearly presented in the findings?	Yes
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	Yes

Appendix 9 – Ethical approval for Study 2

Research Ethics
Office

Franklin Wilkins Building
5.9 Waterloo Bridge Wing
Waterloo Road
London SE1 9NH
Telephone 020 7848 4020/4070/4077
reo@kcl.ac.uk

KING'S College LONDON

Jill Domoney

9 May 2017

Dear Jill ,

Study Title: Men's experiences of the transition to parenthood

Study Reference: Review Reference

I am pleased to inform you that full approval for your project has been granted by the PNM Research Ethics Subcommittee .

For your information, ethical approval has been granted for 3 years from 9 May 2017. If you need approval beyond this point, you will need to apply for an extension at least two weeks before this. You will be required to explain the reasons for the extension. However, you will not need to submit a full re-application unless the protocol has changed.

Ethical approval is required to cover the data-collection phase of the study. This will be until the date specified in this letter. However, you do not need ethical approval to cover subsequent data analysis or publication of the results. For secondary data-analysis, ethical approval is applicable to the data that is sensitive or identifies participants.

Please ensure that you follow the guidelines for good research practice as laid out in UKRIO's Code of Practice for research:
http://www.kcl.ac.uk/innovation/research/support/conduct/cop/index.aspx

Please note you are required to adhere to all research data/records management and storage procedures agreed to as part of your application. This will be expected even after the completion of the study.

If you do not start the project within three months of this letter, please contact the Research Ethics Office.

Please note that you will be required to obtain approval to modify the study. This also encompasses extensions to periods of approval. Please refer to the URL below for further guidance about the process:

http://www.kcl.ac.uk/innovation/research/support/ethics/applications/modifications.aspx

Please would you also note that we may, for the purposes of audit, contact you from time to time to ascertain the status of your research.

If you have any query about any aspect of this ethical approval, please contact the Research Ethics Office:

(http://www.kcl.ac.uk/innovation/research/support/ethics/contact.aspx)

We wish you every success with this work.

Yours sincerely,

Mr James Patterson
Senior Research Ethics Officer

For and on behalf of

Dr Jane Petty, Chair of the PNM Research Ethics Subcommittee

Cc: Kylee Trevillion

Appendix 10 – Topic guide for Study 2

Topic guide

Thank you for agreeing to take part in this study. I'll ask you some questions about what it's like becoming a father, what you've enjoyed and what's been difficult, as well as some of the things that you're learning through being in the Healthy Relationships Healthy Baby programme. There are no right or wrong answers to the questions, we are interested in your thoughts and experiences and appreciate you participating in this study.

Becoming a father

Discussion themes

Previous parenting experience

- *Explore their past parenting experience*
  - *Do they already have children? If yes, what has the experience been like?*
  - *If no, did they talk to anyone about becoming a father? Did they know what to expect?*
  - *Was this baby wanted /planned?*
- *Explore whether their approach to parenting has changed with their new child(ren)*
  - *If so, why and in what way?*

Experience of being/becoming a father

- *Explore participants' feelings about becoming a father*
  - *What were their initial thoughts/feelings on hearing they would become a father?*
  - *What have been the key successes and challenges?*
  - *How have they have dealt with any difficulties?*
  - *How has life changed over the past year(s)?*

Learning about fatherhood

Discussion themes

Learning what it means to be a father

- Ask them to discuss their influences and ideas about being a dad
  - *What was their own father/parenting like (including step parents or other significant adults)? How has it shaped their understanding and approach to parenting?*
  - *Explore if they were ever exposed to any violence between caregivers or towards themselves when they were a child.*
  - *What/who influenced them? How has this shaped their experience as a parent?*

- *Explore who they talk to about being a dad and how to do it*
    - *If they don't talk to others, why? Do they have people they could talk to if needed?*
- *Explore what they think it means to be a father. What is their idea of an ideal dad?*

How their fathering has developed and changed

- *Explore how their fathering has changed over time? Has it been different with different children? In what ways? Why?*

Relationships

Discussion themes

Relationship with partner/mother of their child(ren)

- *Explore whether anything has changed in their relationship since having a child*
- *Explore their and their partners approach to parenting and any similarities and differences Do you and your partner ever disagree about looking after the baby/children? What sorts of things do you disagree about and how do you resolve those differences?*

Relationship with their child(ren)

- *Explore the amount of time spent with child(ren) and activities undertaken*
- *What do they enjoy most about being a dad?*
- *Explore any difficulties participants' experienced in their relationship with their child(ren) What's the most difficult thing about being a dad?*
- *Explore whether there is anything they would change about their relationship with their children*
- *Discuss how their children would describe them as a father*
- *Explore what/who they think will be the main influences on their children as they grow up*

HRHB programme and engagement with services

Discussion themes

Experience and impact of the HRHB programme

- *Explore the reasons for signing up to the HRHB programme. What was the context at the time? How did they engage you with you programme?*
- *Explore if anything has anything changed as a result of taking part? For you? For your partner? For your children?*
- *The programme is aimed at families where there is domestic violence. Explore how domestic violence impacted on them, their partner and their children?*

- *What do they hope will be different by the time they complete the programme?*
- *Would they recommend this programme to friends/family in similar situations? Why?*
- *Anything they would change about the programme?*

Engaging with services

- *Explore how they come to know about forms of support and their thoughts about using services.*
- *Explore ways that professionals could improve engagement and uptake of men in the perinatal period.*

Looking ahead

Discussion themes

Perception of role as a father

- *Explore how they see their role as a father developing over the coming years*
- *Explore their hopes for the future of their children*

Interview close

- Ask whether there are any other topics in this discussion which participants want to explore

Appendix 11 – Participant information sheet for Study 2

THE STEFANOU FOUNDATION

KING'S College LONDON

PARTICIPANT INFORMATION SHEET

Title of Project: Men's experience of the transition to parenthood

As you are taking part in the For Baby's Sake (previously: Healthy Relationships: Healthy Babies) programme, we would like to invite you to take part in a study exploring men's experience of becoming a father. Please take time to think about this information sheet and discuss it with other people if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you would like to take part.

What is the purpose of the study? The Stefanou Foundation have created the For Baby's Sake programme to help expectant parents bring an end to domestic abuse and the harm it can bring to their baby's mental health and emotional wellbeing. We would like to understand more about men's experiences of becoming a parent while they are taking part in the For Baby's Sake programme. To do this, we would like to hear about your thoughts, feelings and experiences about becoming a father while you are taking part in the For Baby's Sake programme. This study is being conducted for educational purposes as part of a doctoral research programme.

Do I have to take part? No. It is up to you to decide whether or not to take part. If you decide to take part you are still free to leave the study at any time and without giving a reason. In this case, we will ask you whether we can keep any data you have already provided. After 1st July 2018 it will not be possible to withdraw your data from the study. This would not affect the care you receive either now or at any time in the future.

What will happen to me if I take part? If you take part in the study, you will be interviewed by a researcher at a time and place that is convenient for you. The researcher is a psychologist who has experience of working with families at the time of having a baby. The interview will take between 30-60 minutes and there are no right or wrong answers to any of the questions.
You will be asked questions about your thoughts and experiences of becoming a father, including your feelings about the pregnancy and your baby and your reasons for taking part in the For Baby's Sake programme. We would like to audio-tape these discussions. All identifying information (e.g. names) will be removed during transcription so that your interview is anonymous. We will also ask you to complete some brief questionnaires about your current health and wellbeing.
With your permission, we will look at the data you have given to the For Baby's Sake team and the evaluation team. This will help us to understand more about the background and needs of the people who take part in the study.
We will give you a £20 gift token at the interview to thank you for taking part in the research, and we will reimburse any travel expenses. If we carry out future research in this area, we would very much like to contact you about taking part. Please indicate on your consent form whether you would be interested in being contacted about our future studies; this will not affect your participation in the study.

What are the possible advantages of taking part? We cannot promise that the study will help you but your information will help to increase the understanding of how we can improve responses to domestic violence and abuse.

What are the possible disadvantages of taking part? Some of the questions may bring up distressing memories or feelings. You can take your time answering and can choose not to answer questions. At the beginning of the interview we will ask you if there is anyone you would like us to contact for support for you if you become very distressed. Your safety will always be our priority. We will talk to you about safe ways to contact you, and about whether it is safe for you to keep information about the study in your home.
What if there is a problem? If you have a concern about any aspect of this study, you should contact the Principal Investigator, Jill Domoney (020 7848 5129 / HRHB@kcl.ac.uk). If you remain unhappy and wish to make a formal complaint, you can contact Dr Kylee Trevillion [Research Fellow], kylee.trevillion@kcl.ac.uk, 020 7848 5061.

Will my information be confidential? The information you provide will be confidential and we will not share this with your partner/ex-partner or any professionals involved in your care. The only exception to this is if you tell us information leading to concern during the interview which suggests a risk of death (including suicide) or serious harm to yourself or to others. This includes if you tell us information which suggests a risk of harm to children. If this happens, we will inform the professionals involved in your care.
Your information will be stored securely and any identifiable data (e.g. your name and contact details) will be kept separately from the answers you give during the interviews. Data collected for the study may be looked at by authorised people from regulatory authorities to check the study is being carried out correctly; all will have a duty of confidentiality to you as a research participant.

What will happen to the results of the study? The results of this study are likely to be published as an academic publication. We will not use your name or details that could identify you. With your permission, anonymised direct quotations from your interview may be used in research reports and publications. Copies of all publications will be available from the researchers.

Who is funding and organising the study? The study is funded by the Stefanou Foundation. King's College London is organising the study.

Who has reviewed the study? This study has been reviewed and given favourable opinion by the Research Ethics Office at King's College London.

Where can I get additional support? RESPECT is a charity which provides confidential information and advice to help perpetrators change their behaviour. Call 0808 802 4040 or visit their website: www.respectphoneline.org.uk.

Contact for further information: PO31 Institute of Psychiatry, De Crespigny Park, London, SE5 8AF.
Thank you very much for reading this information sheet.

Appendix 12 – Consent form for Study 2

CONSENT FORM

Title of Project: Men's experience of the transition to parenthood

Chief Investigator: Dr Jill Domoney

Mandatory Items:

1. I have read and understood the Participant Information Sheet for the above study (dated 22.03.17 version number 2). I have had the opportunity to think about the information, ask questions, and have had my questions answered.
2. I understand that taking part in the study is voluntary and that I can leave at any time, without giving any reason, without my medical care or legal rights being affected.
3. I agree to take part in this study.

Optional Items: You may still participate in the study if you do not agree with the following items

4. I agree to the audio recording of this interview. I understand that the recording will be transcribed and that all personal details will be removed so that the data is anonymous.
5. I give permission for the researcher to have access to data collected by the HRHB evaluation team.
6. I give permission for the researcher to have access to data collected by the HRHB programme.
7. I agree to anonymised direct quotations from my interview being used in research reports and publication.
8. I agree to be contacted by the researchers about ethically approved related studies.
9. I would like to get feedback about the results of the study.

_____	_____	_____
Name of Participant	Date	Signature
_____	_____	_____
Name of Person taking consent	Date	Signature

Appendix 13 – Ethical approval for Study 3

Research Ethics
Office

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rec@kcl.ac.uk

KING'S College LONDON

Jill Domoney

14 June 2019

Dear Jill,

LRS-18/19-10760Identifying key components of an intervention for paternal perinatal depression: A Delphi Study

Thank you for submitting your application for the above project. I am pleased to inform you that full approval has been granted by the PNM REP.

Ethical approval has been granted for a period of **three years** from 14 June 2019. You will not be sent a reminder when your approval has lapsed and if you require an extension you should complete a modification request, details of which can be found here:

https://internal.kcl.ac.uk/innovation/research/ethics/applications/modifications.aspx

Please ensure that you follow the guidelines for good research practice as laid out in UKRIO's Code of Practice for research: https://www.kcl.ac.uk/research/support/integrity-good-conduct/index.aspx

Any unforeseen ethical problems arising during the course of the project should be reported to the panel Chair, via the Research Ethics Office.

Please note that we may, for the purposes of audit, contact you to ascertain the status of your research.

We wish you every success with your research.

Yours sincerely,

Mr James Patterson

Senior Research Ethics Officer

For and on behalf of:

PNM Research Ethics Panel

Appendix 14 – Participant Information Sheet for Study 3

INFORMATION SHEET FOR PARTICIPANTS

Ethical clearance reference number: LRS-18/19-10760

Title of study: Identifying key components of an intervention for paternal perinatal depression: A Delphi Study

I would like to invite you to take part in a study which aims to develop a guided self-help intervention for paternal perinatal depression. This study forms part of my PhD research. Before you decide whether you want to take part, it is important for you to understand why the research is being done and what your participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information.

What is the purpose of the study? The purpose of this study is to explore what the key components of an intervention for paternal perinatal depression should be by asking experts in the field. In particular, we would like to understand what an intervention to support these men might include and how it could be delivered. This data will be used to develop a guided self-help intervention for paternal perinatal depression.

Why have I been invited to take part? As someone who works with fathers in the perinatal period or has specialised knowledge of this area, we would like to ask about your views and opinions about key components of an intervention for paternal perinatal depression, including your views on the best format for delivering such an intervention.

What will happen if I take part? If you choose to take part, you will be asked to participate in a Delphi study which involves responding to three rounds of survey questions. The questions will be sent to you in three separate emails with approximately 3-4 weeks between the rounds. The email will contain a link to a questionnaire which you can complete online.

The first round will ask open-ended questions about the possible content and format of an intervention. The next two rounds will ask fixed-response questions which are based on all the responses from the previous round. You will be able to see how many people have suggested certain components, but all answers will be anonymous.

Do I have to take part? Participation is completely voluntary. You should only take part if you want to and choosing not to take part will not disadvantage you in anyway. Once you have read the information sheet, please contact us if you have any questions that will help you make a decision about taking part.

What are the possible risks of taking part? The questions may take some time to answer and we are unable to reimburse you for this time. However, we estimate that the questionnaires should not take more than 20 minutes and we hope that they will stimulate thought and reflection about this topic.

What are the possible benefits of taking part? We cannot promise that the study will help you but your information will help to develop an intervention manual for treating paternal perinatal depression.

Data handling and confidentiality Your data will be processed in accordance with the General Data Protection Regulation 2016 (GDPR). The information you provide will be confidential and we will not share this with anyone outside of the research team. Your information will be stored securely and any identifiable data (e.g. your name and contact details) will be kept separately from the answers you give during the survey. The research team will not know which answers were provided by you. Data collected for the study may be looked at by authorised people from regulatory authorities to check the study is being carried out correctly; all will have a duty of confidentiality to you as a research participant. Data from the study will be stored for 4 years after completion, until December 2023.

An online survey platform will be used to collect responses – this platform collects IP addresses (a unique address that identifies your computer) but this cannot be accessed by researchers. All responses will be exported from this platform for analysis and the online responses will be deleted. Your responses will be anonymous and will not be linked to your name.

Data Protection Statement

The data controller for this project will be King's College London (KCL). The University will process your personal data for the purpose of the research outlined above. The legal basis for processing your personal data for research purposes under GDPR is a 'task in the public interest' You can provide your consent for the use of your personal data in this study by completing the consent form that has been provided to you.

You have the right to access information held about you. Your right of access can be exercised in accordance with the General Data Protection Regulation. You also have other rights including rights of correction, erasure, objection, and data portability. Questions, comments and requests about your personal data can also be sent to the King's College London Data Protection Officer Mr Albert Chan info-compliance@kcl.ac.uk. If you wish to lodge a complaint with the Information Commissioner's Office, please visit www.ico.org.uk.

What if I change my mind about taking part? If you decide to take part you are free to leave the study at any time and without giving a reason. Withdrawing from the study will not affect you in any way. In this case, we will not be able to withdraw any data you have already provided for the study as all data is provided anonymously and therefore, we cannot identify it as yours. However, we will not contact you for further participation.

How is the project being funded? The study is part of a PhD which is part-funded by the Stefanou Foundation. King's College London is organising the study.

What will happen to the results of the study? The results of this study are likely to be published as an academic publication and will be written up as a PhD thesis at King's College London. We will not use any identifiable information about you in any outputs. Copies of all publications will be available from the researchers.

Who should I contact for further information? If you have any questions or require more information about this study, please contact me using the following contact details: jill.domoney@kcl.ac.uk 020 7848 5095

What if I have further questions or if something goes wrong? If this study has harmed you in any way or if you wish to make a complaint about the conduct of the study you can contact King's College London using the details below for further advice and information: Dr Kylee Trevillion (Research Fellow), kylee.trevillion@kcl.ac.uk, 020 7848 0739.

Thank you very much for reading this information sheet and for considering taking part in this research.